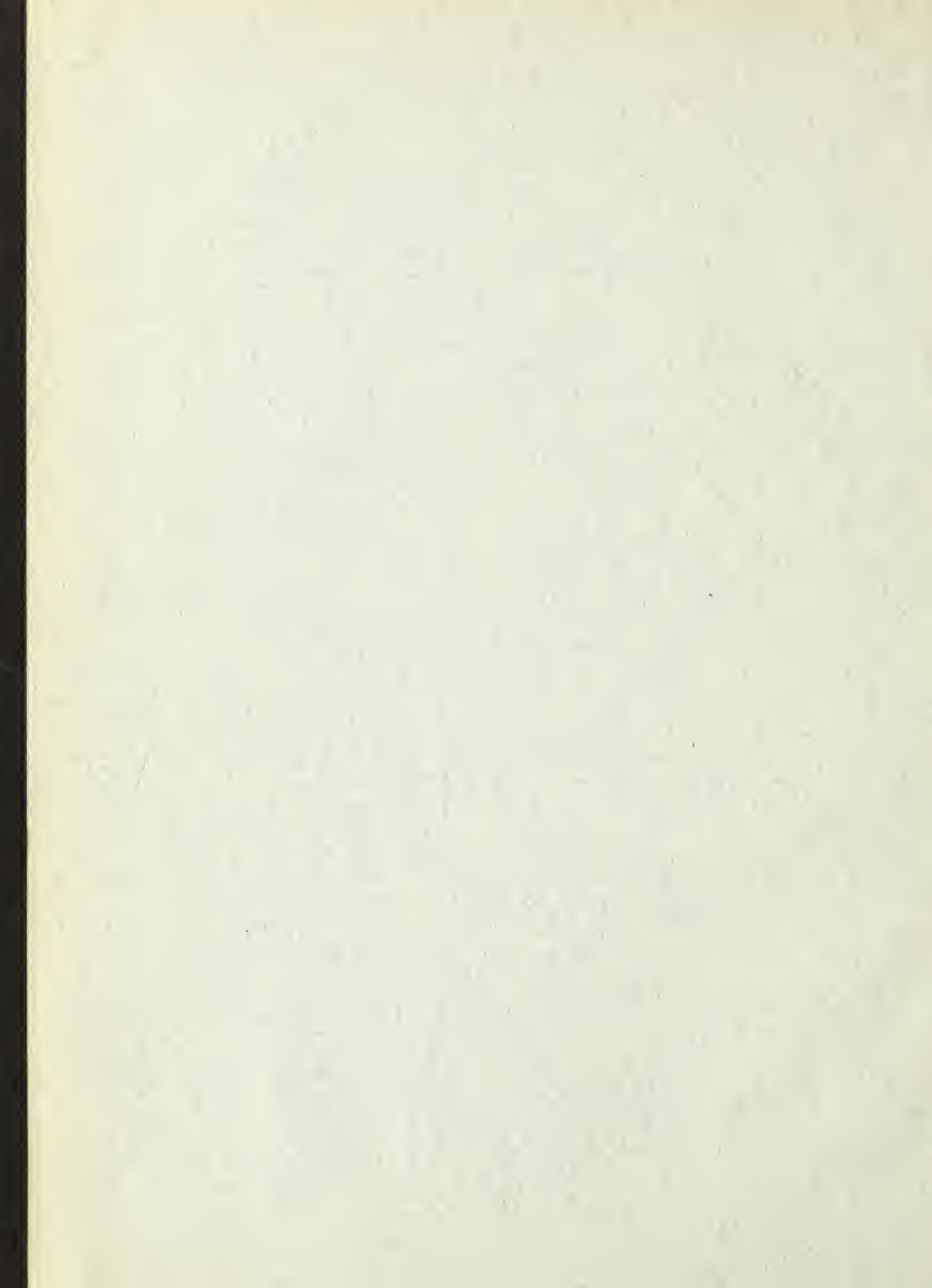


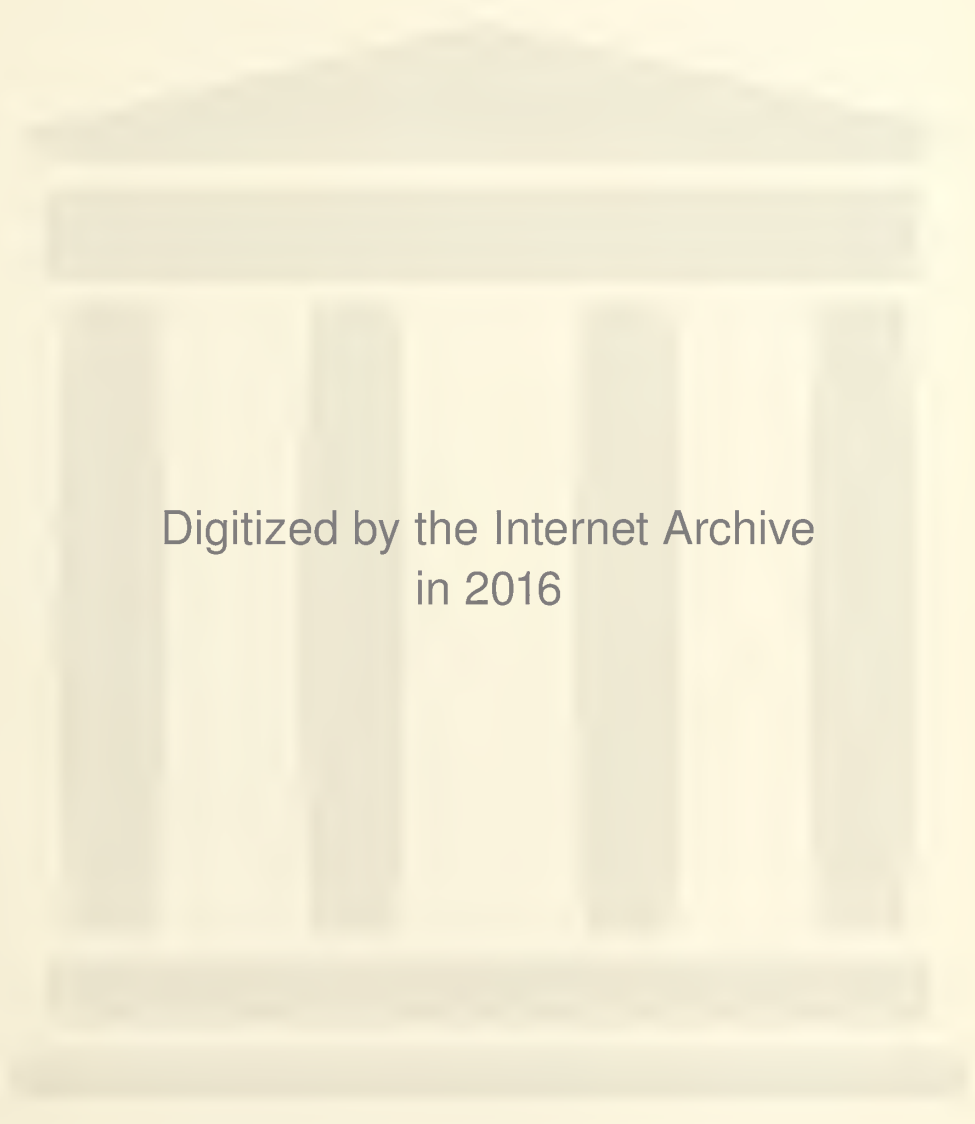
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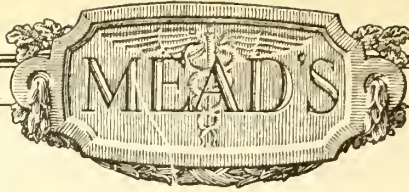
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No. 1

"WHAT IS WRONG WITH THE TONSIL OPERATION?"

By Frederick T. Hill, M. D., Waterville, Maine

More than 2,000 years ago Celsus described his finger enucleation of the tonsils. Since this time the surgical removal of the faucial tonsils has been the subject of most prolific literary effort. Indeed, volumes have been written upon this topic, mostly during the last decade; the preponderance of the work dealing with methods of removal. Is it any wonder that the average physician has thought only of removing the tonsil; instead of carefully inquiring, as to whether, or not, it was really the cause of the disability? And, yet, the literature has been rich in work of the most scientific nature on the subject. The investigations of Loeb, Halstead and Shambaugh have thrown light on the tonsil as a possible focus of infection. Friedburg has shown the tonsil as the site of trouble in diphtheria carriers, while Selfridge has done valuable work on the relations between the tonsil and the ductless glands. With all this mass of work upon the subject, some extremely valuable and some quite the reverse, it is not my purpose to attempt to offer anything new, or original; or to write any

comprehensive review. My object is simply to make a few observations upon the practical application of the subject. My inspiration has been a letter received from a pediatrician, in which he said that he had become quite disappointed in the tonsil operation and a bit sceptical of its results. It is my purpose to try and answer, and allay the doubts expressed in this communication. That this is a subject of quite wide-spread interest is very evident, when one glances at the literature of the past few years. Kaiser's study of the effect of tonsillec-tomy on the general health of 1,200 children as compared with an equal number not operated upon has given us all food for thought. His findings were, to an alarmingly large extent, disappointing, in so far as effect on general conditions went. Why this dissatisfaction? Are we expecting too much? Are we applying this procedure too broadly as a sort of "cure-all" without due regard to individual study? Or is the fault due to the operation?

Just as the tonsil operation has been so prolifically written about, so has it

been practiced. In this fact, I believe, rests the answer to the above-expressed problem. Rather than condemn the procedure, we should criticize its application. Just as the removal of the appendix has become a greatly abused surgical procedure, in many cases of abdominal pain, often regardless of the diagnosis; because it is an operation that is within the ability of the so-called surgeon to do; one that is in his repertoire:— even to a greater extent, has the removal of the tonsils been the means of ill-directed surgical effort. Because it is generally considered an easy operation to do, too often is it resorted to without a careful study of the case in question, to determine if this is the proper procedure. Often indeed, has the almost wholesale removal of the tonsils become the “Slaughter of the Innocents.” Like the traditional Irishman with the club, it sometimes seems to be the endeavor of the physician to strike down every tonsil encountered; whether pathological and the indicated cause of the disease, or not.

This is sufficiently open to criticism when due to the indifferent, or careless attitude of the physician especially trained in throat work and supposedly capable of careful diagnosis in this field. It becomes much more culpable when the general physician, lacking in Laryngological training, starts the process of tonsil elimination wholesale. Once I heard a well-known surgeon say that, “Nowadays anyone is a surgeon who can buy a knife and get someone to lie still for them.” I would paraphrase this remark to the effect that, “Anyone is a throat Specialist who owns a tongue depressor and some sort of tonsil instrument, and can get someone to open his mouth.” Too many physicians have been only concerned with the question

“How,” instead of “Why.” Quite probably this attitude has been due to the mode of postgraduate teaching in vogue up to the last few years. Students going to the large medical centers put in perhaps an average of six weeks work, intent only on learning how to do a few operative procedures. They learned how to remove tonsils, possibly; but the more important question of when and why was never answered. There was no time, or inclination to study the anatomy, physiology, or the pathology. Operative technique was the sole objective. But now there has been a reformation. Repeated warnings have been sounded for years and at last Otolaryngology has begun to put its teaching on a firm basis. The establishment of the National Board of Otolaryngology is a most important step towards putting this specialty on a higher plane. As a result we will have more real clinicians and less operators.

Too often is the tonsil operation considered as a shot in the dark,—as a gamble. Too often is the patient advised to have this done with the vague hope, in the physicians mind, that it may be of some help. Sometimes, I'll admit that it is necessary to proceed on just these very grounds in the process of elimination; but, in by far the majority of cases, I consider that one should have pretty definite grounds for making a diagnosis of infected tonsils and fairly well-defined reasons for expecting benefit from any operative procedure. Neither should we think of this operation as a “Cure-all” or as a step to be taken when all else fails. In its proper application it is simply an operation for the removal of infected, or diseased tissue, and should be performed only when definitely indicated as a probable, or at least, possible cause of the patient's

disability. Unless so applied there will be little satisfaction either to the patient, or to the physician.

It may be fairly assumed that, to a large degree, the dissatisfaction with the results of the tonsil operation are due to its improper application: to;

- (1) Faulty operative technique
- (2) Incorrect diagnosis
 - (a) Inattention to predisposing factors
 - (b) Lack of careful study and intelligent interpretation of the clinical picture, including history and examination, both general and local
 - (c) Ill-advised time of operating.

If the tonsil is the cause of the patient's disability and if it can be removed completely without detriment to the patient, the result should be satisfactory.

Anatomically the faucial tonsils are placed in the fossae between the anterior and posterior palatine pillars. They are masses of lymphoid tissue, oval in shape and vary in size according to their condition and the age of the patient. The anterior pillar, or boundary, is made up of the palato-glossus muscle; the posterior pillar, of the palato-pharyngeus muscle. Between these, forming the bed of the fossa, we find the fibers of the superior constrictor and internal pterygoid muscles, while at its base, the tonsil is somewhat attached to the fibrous tissue of the tongue. Much has been said about the so-called capsule of the tonsil but this seems to exist only in some of the literature. Israel is convinced from his microscopic investigation of 172 tonsils that any capsule, as ordinarily understood, does not exist. Rather do we have an aponeurotic fascia separating the muscle from the lymphoid tissue with its supporting connective tissue. We may think of the tonsil as a mass of lymphoid tissue, plastered, or thrown into this bed between these

muscles, a good deal the same as we might throw a snow-ball at a crevice in a wall and have it stick there. In the same way the adenoid, sometimes called Luska's tonsil, is a mass of lymphoid tissue in the vault of the naso-pharynx; the greater portion being central, but spreading out laterally and often filling up the fossae of Rosenmuller. These, with the lingual tonsil on the base of the tongue, make up Waldeyer's Ring of lymphoid tissue. Israel also points out that comparatively few tonsils are removed without some muscle tissue attached. This is easily explained when we recall the situation of the tonsil in regard to its bed. On the epithelial surface we find from ten to twenty crypts, extending deeply into its substance. These may be very irregular, extensively branched, and, as Barnes says, with their caliber much greater below the surface than their faucial openings would indicate; making for the accumulation of debris and infected material, and for difficulty in drainage. The chief blood supply to the tonsil is from the tonsillar and ascending palatine branches of the facial artery, while the descending palatine, the dorsalis lingue and the ascending pharyngeal send branches into its midst. There is a large plexus of veins lying in the wall of the fossa. Despite the work of many investigators in injecting inert coloring matter in the turbinates and gums and finding it in the tonsils; according to Barnes, there is no proof of any afferent lymphatics. The efferent lymphatic system drains into the cervical nodes, with the so-called "sentinel gland" at the angle of the jaw. The lingual tonsil, let us remember, is simply a small replica of the faucial. To be sure the crypts are not as tortuous, for the space will not permit, but histologically it is similar and, more

often than is thought, it is of similar pathological significance.

Nothing can be said, with any degree of certainty, in regard to the function of the tonsil. Its physiology is undoubtedly the same as that of the lymphatic nodules elsewhere in the body. In common with the other lymph nodules it probably has something to do with the production of lymphocytes for the blood stream. The theory of some internal secretion, formed in the tonsil, is only a theory and has no supporting evidence. Much has been written concerning the theory that the tonsil served as a protection against bacterial invasion, but practically nothing has been proven. The tonsil, undoubtedly, may prevent the absorption of bacteria from the crypts into the lymphatics. It may act just as any other lymph gland in holding up organisms and, in this way, has a protective function; but no more so than any cervical gland. Possibly this conception of the tonsil as a lymph gland would be a good one for the profession to keep in mind. If it were considered, surgically, just as a cervical gland is considered, and removed only when there were definite indications, there would be less dissatisfaction all around. This might limit the temptation towards unrestrained efforts at removal because of its accessibility.

According to Barnes, bacteria appear in the crypts of the tonsil 24 to 72 hours after birth, at about the same time as the bacterial invasion of the intestinal canal. Considering the structure of the tonsil with its deep and tortuous crypts, easily occluded at their orifices by inflammatory reaction, is it any wonder that they are so frequently the site of an infectious process, either manifesting itself locally, or systemically?

If we will look on the tonsil operation

simply as a proper means of eliminating a focus of infection, or diseased, or hypertrophied tissues, which are the cause of disability to the patient; and carefully endeavor to prove this to be the case, rather than relying upon "snap diagnosis," or considering it in the category of a fair gamble, we may assume that any subsequent dissatisfaction will be due either to incorrect diagnosis, or to faulty operative technique. The operation has received so much publicity and is so widely known, even among the laity, that oftentimes, we may be almost stampeded into performing it, when the facts hardly justify it. Physicians, and even patients themselves, having heard of improvement following this operation among their friends, sometimes demand that we operate. It is in the same category as the extraction of teeth. Some one has some vague ill-defined trouble and is advised on all sides to either have their tonsils, or their teeth out. In the face of such rash and hasty proceedings, is it any wonder that there is a great deal of unsatisfactory after-results?

The mass of work on the tonsil problem has been upon various methods of removal; surgical, or otherwise. One could almost say that there were as many different operative procedures as there were operators. All have their advocates and, practically all, their advantages. What is the best operation for one may be quite the reverse in another's hands. We are all agreed that enucleation is the only proper course to pursue. Then the operation which removes the offending tonsil completely, with the greatest degree of safety to the patient and the least trauma, discomfort, and distortion to the throat afterwards, at the hands of any operator, is the best one for him to employ. First, prove in so far as possible that the tonsil

should be removed, and then do it by the safest, surest, and least damaging method. Briefly we may divide the operative methods into those which dissect the tonsil either by knife, scissors, or blunt instrument, and complete the removal with the snare; and those which dislocate the tonsil from its bed and then sever its attachment. Personally I believe that both types have their field of usefulness and that the aspect of the individual case should determine just which method to employ, provided the operator is competent to use more than one. In children, with large so-called "virgin" tonsils, those not tied down with adhesions, or scars of old peritonsillar abscesses, where the tonsil will easily dislocate, I prefer the LaForce instrument, because of the easier convalescence resulting from its use, in my hands. In all of the buried type, those tied down with adhesions, or with histories of old peri-tonsillar disease; and those, encountered far too often, which have already had a tonsil operation, either tonsillotomy, or unsuccessful tonsillectomy; and in cases done under local anaesthesia, the sharp knife and snare dissection is my choice. I believe that it is wise to have several different types of tenacula, or seizing forceps, at hand so that the tonsil may be grasped in such a manner as not to distort it before dissection. All cases should be hospitalized and prepared for operation as carefully as for any other surgical procedure. A careful general physical examination should always precede, and this should include the routine laboratory tests, with some investigation as to the coagulation time of the blood. The work at the Massachusetts Eye & Ear Infirmary, where all children under 10 years of age have been routinely examined by X-ray, has shown the presence of an enlarged

thymus gland in 7% of their cases, an observation of alarming significance. While this X-ray examination of every child may seem a difficult routine for the average surgeon to follow, its importance cannot be over-estimated. We should always consider the possibility of persistent thymus in the young child and routine X-ray examination is the only really safe course to pursue. I have had a small series examined but so far we have not encountered any positive cases. It may be that the type of case going to the charity clinic in the large city is more apt to have a persistent thymus than the type we find in private practice, or in our locality. Those more versed in regard to the endocrines will be better able than I to answer this question.

While most of us routinely employ the preliminary hypodermic medication of morphine and atropine, some men have expressed doubt as to its advisability. Bigelow felt that the patient was safer without this as it might have some inhibitory influence on the pharyngeal and cough reflexes which are protective to the respiratory tree. Patients, whether for local, or general anaesthesia, should not be allowed to walk to the operating room, but should be carried there, and during the administration of the anaesthetic the room should be quiet and nothing should be allowed to excite the patient. A nitrous oxide and oxygen induction in all other cases, except the very young, is of great solace to the patient and reduces the amount of ether required.

Despite all that has been written concerning the possibilities of pulmonary complications, due to the position of the patient, I do not believe that this makes very much difference. Certainly statistics do not show this to be a factor. We have yet to learn whether these compli-

cations are inspiratory, or embolic. Authorities differ. Probably they occur in both ways. Whatever the route, the main thing in prevention is a skillful, careful operation performed at the proper time. The condition of the patient, the nature of the operation, control of the bleeding and avoidance of the undue trauma are the biggest factors. Bigelow has pointed out that the sitting position is the position of choice for one to cough:—and the cough has been called by Jackson, "the watch-dog of the lungs," and is generally considered a means of clearing the trachea, although Myerson's findings in a series of bronchoscopic observations during tonsillectomy showed that blood and saliva does not impart sufficient stimulus to set the cough reflex in motion. He does not feel that the cough is the normal mechanism of expulsion in tonsillectomy under light anaesthesia. Possibly the swallow reflex is of more importance, or that later the patients clear the tracheo-bronchial tree by coughing. At any rate a bit of coughing makes the operator feel somewhat safer. With the patient sitting forward and a careful anaesthesia, a most important factor, so that the pharyngeal, or swallow reflex is not lost, careful technique, and the constant use of suction, I consider that we are as safe as possible. There is some difference as to the advisability of the use of suction. Some men, including Large, feel that it predisposes to bleeding. Used carefully, it seems bound to be a decided aid in the operation. I use a suction-tube attached to the under-side of the tongue depressor. It is always in place, does not directly touch, or suck upon the tissues of the fossae, and certainly makes for a clear field. All bleeding points should be controlled and the field should be dry before the operation is considered com-

plete. Hemostats, ligatures and, if necessary, sutures will accomplish this, if one adds patience and persistency to one's armamentarium. Green advocates holding the severed tonsil firmly in the fossa for two minutes after removal, using the tissue juices to facilitate clotting. Jervoy makes use of the Cushing brain clamp when ligation is too difficult.

Most every operator has his own pet routine of post-operative treatment, but I doubt if anything has ever been devised which will discount, to any marked degree, the discomfort following this operation. The amount of suffering will, of course, vary with almost every case. Much depends upon the individual, his resistance, the condition of his throat, the type of operation employed and the amount of manipulation involved in the procedure. The least possible amount of sponging during the operation should be insisted upon. Rest in bed, attentive nursing, opiates, or sedatives if required, and an intelligently selected diet, all make for the well-being of the patient. Heat applied to the neck is comforting, while the use of warm saline irrigations, as well as a gargle, or mouth wash, of aspirin solution, 20 grains to a glass of warm water, seems to bring relief. Having the nurse lift up the head, putting traction upon the pharyngeal muscles, enables the patient to absorb nourishment and fluids with added ease. Various local applications both immediately after the removal of the tonsil and later during the convalescence, are advised by many. Compound tincture of benzoin, tincture of iodine, silver nitrate, scarlet red, argyrol, etc., have been so employed, but it is doubtful if there is much of any benefit accruing from these measures. After five or six days, when the pain is largely "muscle soreness," having the patient chew gum, exercises

these muscles and seems to limber up the tissues with resulting comfort. But at the best we must count on a period of discomfort varying from six days to two weeks. The redeeming feature is the promise of better days ahead and usually the discomfort is sufficient to make the succeeding period bound to seem one of great improvement.

One common source of error is failure to pay attention to the lingual tonsil. Frequently overlooked, it may be as much at fault as the larger and more evident faucial tonsil. Especially when using the Sluder, or LaForce type of instrument, one is apt to leave a bit at the lower pole which, if neglected, may hypertrophy and migrate upward into the fossa, later giving the appearance, of a pretty fair-sized tonsil. This lower bit, and any evident lingual tonsil, should be removed. This will save quite a lot of later dissatisfaction. Dr. H. E. Thompson has very kindly examined a few lingual tonsils for me. The number available at this time was too meager to make the findings of any real value, but he has reported cultural growths of streptococci, staphylococci, and a gram negative bacillus, showing that we must consider the lingual, as well as the faucial tonsil, as a possible focus of infection.

Proper pre-operative preparation of the patient, insistence upon hospitalization, a trained operating-room crew, careful anaesthesia with due regard to the preservation of the pharyngeal reflex, with conscientious after-care; all are conducive to a satisfactory result. A great deal of the post-operative criticism is due to incomplete operation, leaving bits of tonsil, or adenoid tissue, distortion of the throat, obliteration of the pillars, and damage to the uvula, or soft palate. Due care will eliminate most of these at the hands of the trained operator. Care-

ful inspection of the fossae, after removal of the tonsil, and especially of the under-side of the anterior pillar, will sometimes reveal a bit remaining, when the operator was certain that the tonsil had been removed in toto. Many so-called recurrences are simply due to the hypertrophy of what is really extra-capsular (so-called) tonsillar tissue, lymphoid follicles at the base of the tongue, or a part of the lingual tonsil. Care to remove these, if demonstrable, will often solve this difficulty. Sometimes patients who have had their tonsils removed, will subsequently complain of irritative throats. Examination will reveal hypertrophied lateral pharyngeal bands. Apparently Nature sometimes tries to make up for the loss of lymphoid tissue by causing this enlargement. Why this should be, we do not know. There may be a dietary factor, or the endocrines may have something to do with it. If we can get at the fundamental cause of this hypertrophy we will accomplish more than can ever be done by way of local applications. Incidentally, patients should not be told that after a tonsillectomy, they will never have a sore-throat, for such a statement is apt to breed disappointment and dissatisfaction. They should be given to understand that for some very good reason it is deemed advisable to remove their tonsils; that after this is done, this evident focus of infection will be eliminated and that they will not have "Tonsillitis." However, they should realize that they are liable to have a sore-throat, for the mucosa of the pharynx may become inflamed, or these lateral bands swollen, if sufficient cause is given.

During the past few years we have heard a great deal concerning the treatment of tonsils by X-ray and by Radium. There has been much discussion pro and

con, but its advocates have given little scientific, or clinical proof that this is practical. The X-ray advocates have laid stress on the reduction in size of the tonsil almost entirely. We all must realize that this is of little importance. It is the infective organism within the tonsil that we wish to eliminate. Witherbee, the leading exponent of this method, has been the target of a great deal of criticism, due to his radical statements without clinical backing. Mc-Millan, at the Massachusetts Eye and Ear Infirmary, found that in none of his cases, after 10 to 12 exposures, did the lymphoid tissue disappear. The size of the hypertrophied tonsils decreased to about normal. The observations of Shurley were similar except that the decrease in size was only about 50%. Borden has shown by examining tonsils removed, after having been subjected to the X-ray treatment, with the technique advised by Witherbee, that there is no decrease in the infection of the tonsil; in fact, he is inclined to believe that it may be quite the reverse. And may not any shrinking of the tonsil serve to seal the crypts and prevent drainage, thus increasing the amount of infection? Less has been heard about the use of Radium but several competent observers have reported success from its use. Electro-coagulation has not been practiced to any large extent, and little can be said for it at present. But if a tonsil is infected and a source of danger to the patient, the only sensible course to pursue is to remove it thoroughly, with whatever method promises the greatest degree of safety and surety against recurrence of trouble to the patient. No reliance can be placed upon the X-ray treatment. In certain cases, of bad operative risks, such as "bleeders," the advanced tubercular, or cardiac cases, or

in the senile, radium, or even electro-coagulation may be employed to advantage. But our main reliance must be upon the surgical removal, with irradiation limited to cases with marked contra-indications to operation.

The dissatisfaction due to faulty operative technique can be remedied by a more careful and critical attitude on the part of both the physician referring the case for operation, and on the part of the patient. Too many men are attempting this operation who are unqualified to do it. While they may "get away with it" in the majority of cases, they are bound sooner, or later, to run up against a condition which invites disaster. If no man attempted any surgical procedure who was not qualified and capable of handling any condition which he might find in that given field, the world would be safer for all concerned and Surgery would be upon a higher plane. If consulting physicians and patients, or their families, would insist upon the best available operative skill, much of this trouble would be eliminated.

The conditions justifying the removal of the tonsils may be classed under two headings; local conditions in the pharynx; and general conditions in which we may consider the tonsil as a cause of the trouble, or a focus of infection. Under the first we have Tonsillitis (repeated attacks); Peri-tonsillar Abscess; Vincent's Angina; Tuberculosis of the Tonsil; Neoplasm; Otitis Media, either suppurative or catarrhal, where the tonsil, or adenoid condition has a direct effect on the Eustachian tube and middle ear; in diphtheria carriers; and sometimes where the tonsils, or adenoids are such as to mechanically obstruct breathing. Under the second heading of general conditions which may be caused by a focus of infection in the ton-

sil, we have:— Arthritis, acute or chronic; Endocarditis; Myocarditis; Pericarditis; Chorea; Nephritis, acute or chronic; Pyelitis; Neuritis; Infectious Jaundice; Osteomyelitis; Pulmonary Gangrene; Cervical Adenitis; Paranasal Sinus Disease; predisposition to common colds; and chronic toxemias without localized lesions, as well as certain endocrine disorders. Even appendicitis and peritonitis have been considered as due to tonsillar infection. The possibility of the tonsil being the focus in cases of joint, heart, kidney and glandular disease is seldom lost sight of in these days. The criticism is rather due to the tendency towards jumping at the tonsil as the offender, instead of trying to ascertain by careful investigation and study, if it is the cause of the disability. Sometimes it is only by the process of exclusion that this is possible. The condition of the teeth and gums, ears, sinuses, gastrointestinal and genito-urinary tracts must never be lost sight of as possible foci. And if the tonsil be the primary focus of infection we may have recurrences after removal, the infective agent remaining dormant in some other part of the body. As Hunt and Osman have pointed out, the tonsil may be simply the portal of entry in the first attack and later the organisms may be located in other tissues.

But should we not give heed to factors which may indeed be predisposing? Lowered resistance, poor environment, faulty hygiene, and incorrect ill-balanced diet all may play a part, causing repeated flare-ups of a bacterial focus. In the majority of cases the period of activity of the infective organism in the tonsil is during the earlier years of life, when these predisposing factors assume more importance. This is admittedly so in the type of cases having local mani-

festations of tonsillar disease, while in the type suffering with systemic disorders, from a local infection in the tonsil, we may usually glean a history of throat trouble in childhood. Should we not ask ourselves the question more frequently, "Why does this child have infected, or hypertrophied tonsils," instead of simply satisfying ourselves that he, or she has them? Perhaps we could not answer this, but it would be good for all concerned if we tried.

Much has been done recently along dietary lines. There is no doubt that an ill-balanced, or deficiency diet is productive of tonsillar disease during the period of life in which the lymphoid nodules are at their greatest activity. Clark's work on cats, investigating the relations of the size of the tonsil to diet, brings out the fact that diet is of the greatest importance in this regard. A high fat and high calories diet caused a considerable increase in the size of the lymphoid nodules, both in the tonsil and in Peyer's Patches. Dean has found that a diet deficient in the fat soluble A vitamins, predisposes to paranasal sinus disease. Stucky, in his work among the Kentucky mountaineers, found that milk, eggs and butter were almost unknown as foods. Even the children rarely drank milk. Their diet consisted largely of fried foods, coffee, pork, corn etc. He found these children suffering from tonsillar and adenoid trouble to a degree hitherto unseen in his experience. Those children, operated upon and their diet changed, adding milk, butter, eggs and cereals, showed almost miraculous improvement; while in cases where no dietary change was made, the operative results were very unsatisfactory. And it is not always the poor, or underprivileged child, alone, who suffers from dietary error. Often the child of

the so-called better classes, is the victim of malnutrition. In our present day civilization a proper well-balanced diet is comparatively a rarity. And often the spoiled child of wealthy parents is as poorly fed, as the poor Kentucky mountaineer or the inhabitant of the East side slum. It isn't necessarily undernourishment that predisposes to lymphoid enlargement. An ill-balanced diet may be the cause.

Only recently a woman, 40 years of age, consulted me in regard to her ears, complaining of some tinnitus and a feeling of fullness. Two years before I had carefully examined her, not that she had any trouble, but simply for a routine check-up, because she wished to be sure she was all right. Her husband was quite deaf and she naturally had her attention brought to this subject. My record shows that I had found nothing wrong. She had a slightly irregular septum, not obstructive; small tonsils, and no adenoids. The examination included inspection of the nasopharynx with the nasopharyngoscope. From this I feel certain that she had no excess of lymphoid tissue in her vault at that time. This last time she had a catarrhal involvement of both Eustachian tubes. On examination I was surprised to find not only both tubal orifices swollen, but enough excessive lymphoid tissue in her vault to resemble a well-defined adenoid. Her husband had been on a very rigid diet to reduce weight. She said that she had been following the same diet, although it was not what she herself needed. All butter-fats had been absolutely eliminated. She had had almost a continuous head-cold, obstructed breathing and then this trouble with her ears. I feel certain that this condition was influenced, at least, if not caused, by this faulty, ill-balanced diet. Putting her back on a

well-balanced diet has shown improvement although it is too early yet to make to make any definite observation as to a complete return to the previous condition.*

We must also not overlook the all so prevalent fault of over-eating. Clark's work, mentioned above, is of extreme significance. Highly milled grains, deprived of their natural vitamins, heavy starches, cane sugar products, and meat are apt to form too much of our dietary foundation; to the exclusion of milk, butter, eggs, green vegetables, fresh fruits, and whole grain cereals. The importance of the intestinal tract as a focus of infection which may manifest itself locally in the nose, or throat has been brought out by the work of Dwyer and Connellan in investigating the significance of Histamine in the stools. These stools all show a great degree of acidity, due to formic and oxalic acids, and a low colon bacilli content. Elimination of the sugars from the diet and alkalization of the intestinal tract solves many a problem in which the throat may seem to be the offender. And yet, how rarely do we examine the stools in these cases of focal infection? While there is an enormous field yet to be investigated, the surface of which has only been scratched, we cannot overlook the fact that diet must play an important part in the etiology of many cases of tonsillar disease. As time goes on, we will think more of the prevention of these conditions in childhood by proper dietary and hygienic control, and less of the matter of surgical elimination.

The greatest cause for dissatisfaction with the tonsil operation, in my opinion, is due to hasty, or incorrect diagnosis. Many an operation has been beautifully performed, but with little, or no subsequent satisfaction to the patient, or the

*Since the time this was written this patient has shown a return to normal.

attending physician, because of this error. Too little attention is ordinarily paid to taking a careful and complete history. It is a great temptation to skip over this rather hurriedly and, perhaps unconsciously, lead the patient into giving us a story conforming to our already conceived ideas of the case, when a careful investigation into the patient's past might point to something radically different. This is especially true in cases of focal infection. Never should we forget that there are other possible sources of the trouble, quite as apt to be at fault as the tonsils. While a history of several attacks of sore-throat is very suggestive we must always, bear in mind that this may be only incidental and that some entirely different thing may be the cause of the patient's disability. Past and present history, as well as habits of living should be most carefully scrutinized. The tonsils may show evidence of disease but the patient's complaint may be due to something quite different. Tonsillectomy in such a case may indeed be beneficial, but too frequently the patient, getting no relief from his trouble, is thoroughly dissatisfied.

A short time ago I had a patient referred to me to have a tonsillectomy, provided I found his tonsils diseased. His chief complaint was Glossodynia. He had been in the hands of a number of different physicians and it had finally been suggested that his tonsils be removed. His tonsils were not normal; in fact I found quite a bit of debris in the crypts, but the history pointed to something more than a chronic tonsillitis. He gave a story of feeling fine for a time and then being very weak, tired and all-in for a spell; a typical history of cycles of depression. His color was suggestive. I had a blood count made, which was

reported as follows; W. B. C. 7,000; R. B. C. 1,220,000; Hgb. 70%; Differential, polymorpho-nuclears 70, large mononuclears 20, small mononuclears 20, considerable poikilocytosis. The patient was referred back for further general examination, an enlarged spleen was found and a diagnosis made of Pernicious Anaemia. I cite this simply as an example of how easy it is to remove some structure which appears to be offending, when the cause of the trouble is something entirely different.

I recall another man who had been operated upon for tonsils and whose complaint was headache, which in his case, was due to a paranasal sinusitis. He had a high deviation of the septum to the effected side and a submucous resection relieved the pressure headache. Naturally he was disappointed in the result of his first operation. The importance of the teeth, sinuses and ears should never be lost sight of as possible foci of infection.

Barlow calls attention to the fact that oftentimes the failure of a tonsil and adenoid operation to effect a cure for the so-called chronic cold in children, may be due to the presence of paranasal sinus disease which has been overlooked. Dean, some years ago, brought out the fact that this condition is much more common in children than generally supposed. It is too easy to condemn an accessible structure like the tonsil when the greatest offender may be elsewhere. There is an old saying that we must look beyond our nose. As diagnosticians we must see below the throat.

Of considerable significance in cases of focal infection is the finding of a history of sore-throats in earlier life, but none during the past several years. Usually these people have had a focus of infection in the tonsil since childhood. For-

merly they had a certain amount of resistance to the infecting organism, which resulted in a localized inflammatory process, manifested as a sore-throat when there was a flare-up of activity. Nature raised a barrier to the passage of the infectious process. Gradually this resistance became worn down, local manifestations were less, there was little, or no active defense, and, while the sore-throats were less severe, or even absent, there was an ever increasing amount of infection invading the body, until finally we have a well-established systemic disturbance.

While little is known concerning the relations of the tonsils to the endocrines, this matter should receive careful attention. The observations of Looper and others on the beneficial effect of tonsillectomy on many cases of thyroid disturbance is of significance. On the other hand many cases of endocrine pathology may be overlooked, and tonsillectomy prove far from satisfactory because of lack of consideration to the ductless glands. Careful metabolic study of many of these cases would be illuminating. We are all familiar with the picture of the child with a pale, pasty complexion, unhealthy appetite, sluggish stools, chronic nasal discharge, more or less acne, and breathing through the mouth. There is a complaint of backwardness in school, or maybe enuresis. Undoubtedly the removal of hypertrophied lymphoid tissue in the nasopharynx is beneficial in many of these cases, but should not attention likewise be paid to their general metabolism? The endocrines may be at fault, or an improper diet may be a factor, which, if overlooked, may deprive a perfectly performed operation of the desired successful result.

The conservation of hearing should be

a matter of greatest importance to the physician. In many cases of otitis media, suppurative, or catarrhal, the crux of the whole question of successful management lies in the removal of infected tonsils, or adenoids. This should never be lost sight of, as the preservation of hearing and the prevention of untoward complications, means a great deal to the patient; and the elimination of pathological lymphoid tissue from the throat, may turn the tide. With more careful and intelligent attention being paid to the question of tonsils and adenoids we may well expect less chronic ear trouble, with defects of hearing, in the coming generation.

In all these obscure cases where we suspect that the tonsil is the cause of the trouble, we should always insist upon a careful general physical examination. We must never lose sight of the fact that the human body is one grand and glorious whole; that all its structures are more, or less interrelated one with the other; although, in these days of rather intensive specialism, we are apt to overlook any part of the anatomy except that with which we are especially interested. Careful examination of the patient will, many times, bring out other possible causes of the trouble just as important, if not more so, as the tonsils. Here is where we need cooperation. We each have our own fields of work in which we are more, or less competent to make diagnosis. The utilization of the necessary consultants to assure the patient of the best available diagnostic ability, is well worth while to all concerned. Each can add his contribution of information acquired and the patient will receive the benefit. The internist, the pediatrician, the oto-laryngologist, and such others as may be indicated, should all work together. None of

these are sufficient alone. The physical findings of the internist on the throat are very apt to be misleading; while, I am free to say, I doubt if any oto-laryngologist is competent to form much of an expert opinion concerning a cardiac, or lung condition. If all cases were carefully and thoroughly examined by men competent in all indicated lines, before being subjected to operation, there would be less poor results. This examination should include the various forms of laboratory diagnosis, as indicated. The X-ray, blood and serologic tests, urinary and fecal examinations, as well as bacteriological studies should not be neglected. Frequently cultural tests of the bacteria found within the tonsillar crypts are of the greatest assistance in determining whether, or not, the tonsil is the offender. Care to utilize every available diagnostic aid will eliminate many of the causes of dissatisfaction.

For the most part, the ordinary inspection of the pharynx which passes for an examination is worthless to determine if the tonsils are infected, or not. The obvious case will be diagnosed and condemned, but these large pendulous tonsils with wide gaping crypts, exuding debris, are often the ones least likely to cause trouble of a systemic sort. The size of a tonsil is of little importance unless obstructive to breathing. These large tonsils drain fairly well and are usually of pathological significance only as to their local manifestations, as the cause of sore-throats. The most important type of tonsil is usually overlooked. This is the small, buried tonsil, sometimes almost atrophic, with its crypts more, or less sealed, and the products of infection draining into the system, via the lymphatics, or the blood stream. A dull red hue of the pillars, especially the anterior, is of significance,

while the presence of dilated blood vessels running over the face of the tonsil arouses our suspicions. Pressure on the anterior pillar often demonstrates products of infection. Palpation of the cervical glands is of considerable diagnostic importance, sometimes being the most important clue to a focus in a buried tonsil. Perhaps the most valuable means of ascertaining if an apparently innocent tonsil is infected, is by the use of suction. With a glass tube of appropriate size and a rubber bulb capable of giving 15 lbs. of negative pressure, we may be pretty certain to find any debris that may be within the crypts and can gain an idea as to the condition of the tonsil. Frequently we will be surprised by the size of the tonsil as revealed by the suction tube. Culture from the crypts may be of considerable aid. An idea of the activity of the tonsillar process may be gained by applying the suction tubes and as carefully as possible cleaning out the crypts, and then reapplying them again in 48 hours, noting the amount of debris. The tonsilloscope and tonsil illuminators all may furnish information. Sometimes a tonsil will appear quite innocent under every possible means of examination, and yet the history and general condition makes it very probable that it is at fault. And when examined under an anaesthetic, the physician is surprised to see how much debris he can express from the crypts. I consider that examination under a general anaesthetic is of great value in cases otherwise impossible to diagnose. Of course one is hardly justified in having an ether administered for this purpose alone, but oftentimes one may utilize an ether given for another purpose. In cases where there is an adenoid to be removed and the tonsil is suspicious, one can examine under the ether and then pursue the course indicated.

Assuming that the tonsil operation is properly indicated, the time of operating may be a factor in any subsequent unsatisfactory result. This frequently brings up a most difficult question, as to when to operate. Each case must be decided on its own merits, utilizing the same amount of common-sense and surgical judgment as would be used in any other surgical problem. How young should we remove the tonsils? Or how old is it safe to operate? These are common questions. There can be no hard and fast rule. It all depends upon the condition of the patient and the pathology of the tonsils. We used to feel that it was unwise to remove tonsils before the age of three years. In the great majority of cases this still holds true; not so much because of the operative risk, but because the tonsil does not usually cause much trouble below this age. The period of the tonsils greatest activity is the period of the child's most active growth, from three years to puberty. At birth the tonsils are small and innocent. Rarely do they give trouble in these first two, or three years of life. If they do, it is usually in a mechanical way, because their size may obstruct the child's breathing. If this be the case, they can be removed, provided the child is a good operative risk, but it should be done quickly and skilfully, not subjecting the young patient to any more operative shock than is necessary. In case the child is not a good operative risk, it is the part of wisdom to postpone the operation until these conditions, contra-indicating surgery, can be overcome. The idea, sometime advanced, that operation in the very young is unsatisfactory and that the tonsils are apt to recur, is unsound. The operation is more difficult but with a little care the tonsils can be removed completely

and without fear of recurrence. The same holds true for adenoids. The indications for adenoidectomy at this age are usually; obstruction to breathing, otitis media, or a purulent rhinitis. In all these youthful cases, X-ray examination for the presence of enlarged thymus should be a routine.

In the elderly, if we can definitely satisfy ourselves that the tonsil is the cause of serious trouble and there are no contra-indications to operation, we may be justified in advising it. But we should always ask ourselves the question, "Is it worth while to this individual, considering the age and expectancy of life? Will he derive enough benefit from it to make it advisable?" The importance of a careful general examination here can be easily appreciated and care should be used in the selection of an anaesthetic.

Again in the patient disabled from some systemic disease, the time of operation assumes the greatest importance. Always the question of Surgical Risk must be answered. In tubercular cases operation is not considered advisable when there are any signs of activity in the lungs, and here is where we must depend upon the internist, trained in chest work. The same idea holds true for the cardiac cases. Operation during a febrile stage of an endocarditis is assuming great risk. We should wait until the activity of the process has quieted down. Compensation should be established and the patient in the best possible condition to stand the operation. Digitalization should be carried out and the operation undertaken only when the internist considers the risk worth taking. Every operative procedure and each anaesthesia means a certain amount of shock. We should be fairly certain that the patient can

weather this. While some men are advocating the removal of tonsils during an acute attack of tonsillitis, or of a peritonsillar abscess, I cannot agree with this, unless under exceptional circumstances. We all avoid, if in anyway possible, operating in the face of any respiratory infection. What is tonsillitis, if not a respiratory infection? And can we for a minute think that the inflammation is entirely limited to the area of the tonsils alone? The cautious abdominal surgeon hesitates to remove an appendix in the presence of a coryza, or any similar infection of the nasopharyngeal mucosa. Shouldn't the same caution be applied to surgery of the throat? I cannot help feeling that we are courting disaster when we attempt to operate at such a time. Porter advocates the removal of the tonsil during the acute stage, in certain types of peritonsillar abscess, where the abscess is basilar and not easily evacuated. This seems good surgery, as the burrowing of the pus downward may be a grave source of danger to the life of the patient. In all these cases, if we only use the same surgical judgment that is employed elsewhere on the body, operating when the conditions, both locally and generally, are best suited for absence of complications and natural recovery, we will have better success and less excuses to offer afterwards. Sometimes it may be necessary to take a "long chance." The best available consultation may decide that the only chance the patient has, is to get rid of the offending structures immediately. Then we are justified in proceeding, provided this is thoroughly understood by all concerned. But, as a rule, it will be well to wait for the most auspicious time. As physicians, all we can do is to assist Nature. We must be careful that we do not hinder or even

defeat her endeavors by being a bit too hasty. "Fools rush in where Angels fear to tread." And Surgical Caution is more to be valued than mere technique.

SUMMARY

The popularity of the tonsil operation, and the too frequent and universal performance of the same is, in itself, the main cause of subsequent unsatisfactory results.

This is sometimes due to faulty operative technique, often at the hands of untrained operators and resulting in incomplete removal, disregard of other elements of Waldeyer's Ring, post-operative distortion and untoward complications.

Hasty and incorrect diagnosis accounts for much dissatisfaction. Disregard of questions of hygiene, or diet; inaccurate histories and insufficient general study of each case, with due attention to other possible sources of trouble, are frequently the causes of disappointment.

The time of operation is of greatest importance, especially in cases of severe systemic disability.

Careful study of each individual case with utilization of the best available consulting aid will remedy most of these difficulties.

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NEW AND NON-OFFICIAL REMEDIES

Parke, Davis & Co.: Aster Pollen Protein Extract Diagnostic, P.D. & Co.; Barnyard Grass Pollen Protein Extract Diagnostic, P.D. & Co.; Bermuda Grass Pollen Protein Extract, Diagnostic, P.D. & Co.; Burweed Marsh Elder Pollen Protein Extract, Diagnostic, P.D. & Co.; Chestnut Pollen Protein Extract Diagnostic, P.D. & Co.; Cocklebur Pollen Protein Extract Diagnostic, P.D. & Co.; Common Ragweed Pollen Protein Extract Diagnostic, P.D. & Co.; Corn Pollen Protein Extract Diagnostic, P.D. & Co., Cosmos Pollen Protein Extract Diagnostic P.D. & Co.; Crab Grass Pollen Protein Extract Diagnostic, P.D. & Co.; Dahlia Pollen Protein Extract Diagnostic, P.D. & Co.; Dandelion Pollen Protein Extract Diagnostic, P.D. & Co.; Halberd-Leaved Orache Pollen Protein Extract Diagnostic, P.D. & Co.; Giant Ragweed Pollen Protein Extract Diagnostic, P.D. & Co.; Indian Hair Tonic Pollen Protein Extract Diagnostic, P.D. & Co.; Johnson Grass Pollen Protein Extract Diagnostic, P.D. & Co.; June Grass Pollen Protein Extract Diagnostic, P.D. & Co.; Maple Pollen Protein Extract Diagnostic, P.D. & Co.; Marigold Pollen Protein Extract Diagnostic, P.D. & Co.; Orchard Grass Pollen Protein Extract Diagnostic, P.D. & Co.; Plantain Pollen Protein Extract Diagnostic, P.D. & Co.; Prairie Sage Pollen Protein Extract Diagnostic, P.D. & Co.; Rose Pollen Protein Extract Diagnostic, P.D. & Co.; Rough Marsh Elder Pollen Protein Extract Diagnostic, P.D. & Co.; Sage Brush Pollen Protein Extract Diagnostic, P.D. & Co.; Western Ragweed Pollen Protein Extract Diagnostic, P.D. & Co.; Western Waterhemp Pollen Protein Extract Diagnostic, P.D. & Co.; Wheat Pollen Protein Extract Diagnostic, P.D. & Co.; White Clover Pollen Protein Extract Diag-

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COUNTY NEWS AND NOTES

Androscoggin County

Dewitt Hotel, Lewiston, Dec. 17, 1925

Meeting of the Androscoggin County Medical Society, called to order by Acting President Dr. W. W. Bolster.

The annual financial report was read by Dr. L. J. Dumont, the Secretary.

Dr. John Hewatt's application for membership took usual course.

The following officers were elected for the year 1926:

President, Dr. W. W. Bolster.

Vice President, Dr. B. W. Russell.

Sec. and Treasurer, Dr. L. J. Dumont.

Board of Censors: Dr. Wm. H. Chaffers, for one year; Dr. T. Fitzmaurice, (2nd year); Dr. D. A. Barrell, (2nd year).

Delegates: Dr. W. E. Webber, one year; Dr. O. A. Sprague, of Turner, one year.

Drs. W. E. Webber, Alton Grant, H. Garcelon, and J. Sturgis reported very interesting cases.

The following were present: Drs. E. V. Call, Romeo Beliveau, W. E. Webber, W. H. Haskell, E. C. Williams, E. B. Buker, S. L. Andrews, J. Hewatt, E. Leathers, Wm. Fahey, W. W. Bolster, E. C. Higgins, W. J. Ladouceur, J. Sturgis, H. Garcelon, W. J. Renwick, A. Grant, Jr., E. E. Holt, Jr., of Portland,

Earle Richardson of Skowhegan, L. P. Gerrish, of Lisbon Falls, A. W. Plummer of Lisbon Falls, Drs. H. L. Irish and O. A. Sprague of Turner, B. W. Russell, D. A. Barrell, W. H. Chaffers, C. C. Cunningham, H. Sprince, E. N. Giguere, B. G. W. Cushman, J. E. Dupras, and L. J. Dumont.

L. J. Dumont, M. D., Secretary

Kennebec County

The annual meeting of the Kennebec County Medical Association was held Tuesday evening, January 5, 1926, at the Augusta House, Augusta, Maine.

Dinner was served at 6:15 P.M. followed by a business meeting, which was presided over by Dr. A. Brooks Libby, President.

Minutes of the last meeting were read and approved.

The report of the Treasurer was read and approved.

Drs. R. L. Reynolds of Waterville, Warren B. Sanborn of Augusta, and S. O. Clason of Gardiner were appointed a committee on nomination of officers for the ensuing year, and they reported as follows:

President—Dr. George A. Campbell—
Augusta

Vice Pres.—Dr. F. T. Hill—Waterville
 Secretary and Treasurer—Dr. Frederick R. Carter—Augusta

Censor—Dr. E. H. Risley—Waterville
 Delegate to Maine Medical Association,
 for three years—Dr. A. Brooks Libby
 —Gardiner

Alternate—Dr. M. A. Priest—Augusta

The nominees were elected for the ensuing year.

The President, George R. Campbell appointed the following members as a committee on Public Relations;

Dr. George A. Coombs—Augusta

Dr. George H. Coombs—Augusta

Dr. Frederick R. Carter—Augusta

The resignations were received of John S. Milliken formerly of Readfield, now of Portland, he having recently joined the Cumberland County Medical Association, also Rodney D. Turner, formerly of Augusta, now of Newton Centre, Mass., he having joined the Massachusetts Medical Association.

The retiring president, Dr. A. Brooks Libby of Gardiner, delivered the president's address and after speaking briefly of the activities of the past year, read a paper on a unique case of appendicitis, which was of great interest to the doctors. Dr. Wyman Whittemore of Boston, connected with the Massachusetts General Hospital, the Eye and Ear Infirmary and the Jewish Hospital, all of Boston, gave a highly technical paper on "The Treatment of Suppurative Conditions of the Lungs." Dr. Whittemore is one of the foremost authorities and chest surgeons in the country and his talk was listened to with the closest of attention.

The members and guests present were: Drs. R. L. McKay, G. R. Campbell, W. B. Sanborn, G. A. Coombs, H. W. Hall, G. H. Coombs, F. R. Carter, B. B. Santosky, F. C. Tyson, R. H. Stubbs,

Oliver W. Turner, S. H. Kagan, and M. A. Priest of Augusta; B. P. Hurd, H. L. Hill, J. P. Goodrich, J. O. Piper, R. L. Reynolds, F. T. Hill of Waterville; A. Brooks Libby, S. O. Clason, F. E. Strout, W. N. Price, and R. D. Simons of Gardiner; E. A. Morgan, J. W. Brewer and J. W. Laughlin of National Soldiers Home, Togus; Wyman Whittemore of Boston. —*Dr. F. R. Carter, Secretary*

Meeting at Sister's Hospital, Waterville.

The regular monthly clinical meeting at the Sisters Hospital, Waterville, was held Tuesday, Dec. 8th. The following program was presented:-

"The Management of Diabetes"

—*Dr. J. O. Piper*

"Allergic Reactions"—*Dr. B. O. Goodrich*

"Preoperative Safeguards with Special Reference to Respiratory Infections"

—*Dr. E. H. Risley*

"Safeguarding the Patient"—*Dr. F. T. Hill*

Dr. J. O. Piper and Dr. Virgil Totman have been elected to the Staff of the Sisters Hospital.

At the annual meeting of the Staff of the Sisters Hospital the following officers were re-elected for 1926: Chairman, Dr. F. T. Hill; Secretary, Dr. R. L. Reynolds; Executive Committee, Dr. E. W. Boyer, Dr. E. H. Risley, Dr. James Poulin.

A series of Sunday afternoon lectures for the public is being held at the hospital this winter. Every Sunday afternoon some member of the Staff talks upon some subject of interest to the laity along the lines of Public Health and Prevention of Disease. The first of these meetings was held Jan. 3rd, the speaker being Dr. E. H. Risley who took for his topic "The Hopeful Aspect of the Cancer Problem." "There was a large

audience, the lecture-room being packed so that it was necessary to place chairs in the corridor. After Dr. Risley's talk questions were asked by various people in the audience and answered by Dr. Risley. A great deal of interest is being manifested in these Health Talks. Next Sunday the speaker will be Dr. J. P. Goodrich who will talk on "The Origin and Development of the X-ray."

Penobscot County

The Penobscot County Medical Society held its regular meeting at the Bangor House, Tuesday evening, December 15, 1925.

The minutes of the last meeting read and accepted.

Communication from the American Birth Control League, Inc., 104 Fifth Avenue, New York, placed on file.

Application for Membership, Dr. Max E. Witte, Jr. University of Iowa, referred to Board of Censors.

The following were present: Luther S. Mason, M. D.; Prof. L. J. Pollard of U. of M., gave an interesting paper on Interpretation of Life. A. K. P. Smith; D. A. Robinson; E. S. Merrill; H. D. McNeil; C. M. Thomas, Brewer, Maine; S. N.

Marsh, West Enfield, Maine; J. F. Cox; J. B. Thompson; M. O. Brown, Dover; E. E. Brown; A. W. Fellows; N. R. Cook, Newport, Maine; H. C. Knowlton, Hampden; L. H. Smith, Winterport; A. E. Small; C. S. Philbrick; Joseph Lezberg; M. E. Witte, Jr.; H. M. Goodwin; C. J. Hedin; J. P. Russell, So. Brewer; B. L. Bryant; J. A. Lethieq, Brewer; W. E. McDougal, Millinocket; E. W. Russell; A. C. Strout, Dexter; C. H. Burgess; C. J. Taylor; H. W. Johnson; M. C. Moulton; W. J. Hammond, M. D., Dexter, Maine; H. W. Johnson; G. H. Stone; W. E. Fellows; W. B. Trickey, Pittsfield; R. E. Bousfield; J. D. Weymouth, Brewer.

Sagadahoc County

Jan. 15, 1926.

At the annual meeting of the Sagadahoc County Society held at King Tavern, Bath, Maine, on Wednesday Evening January 13, 1926, Dr. Clarence A. Peaslee was elected president, Dr. B. F. Barker, vice president and Dr. S. S. Mullin secretary and treasurer.

An address by Dr. Newton of Boston was the principal one of the evening and was very interesting; his subject was Physio-therapy. —S. S. Mullin

ANNOUNCEMENT

The Tenth Annual Congress on Internal Medicine will be held at Detroit and Ann Arbor, week of February 22—27, 1926.

The Congress is devoted to amphitheatre, bedside and clinical laboratory demonstrations as well as to symposia dealing with modern phases of internal medicine. Distinguished guests from abroad, Canada and the leading clinics of the United States will occupy prominent places on the program. Four days will be devoted to the work at Detroit and on one day, the society will be the guest of the University of Michigan at

the newly opened eleven hundred bed University Hospital.

All physicians, who are interested in internal medicine and who are members in good standing of their local and national societies are cordially invited to attend the Congress.

Hotel headquarters will be at the Book-Cadillac in Detroit. Information regarding reduced railroad rates, program, hotel accommodations, etc. may be secured from the Secretary-General.

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NECROLOGY

**Phillip Henry Sheridan Vaughan
Skowhegan, Augusta, Bangor,
Yarmouthville and Portland**

After an illness of six weeks in the General Hospital, Dr. Vaughan who had been prominent in Maine and in the late war, as a specialist and examiner in nervous diseases, died Sept. 22, 1925 from a carcinoma of the oesophagus.

Born at New Portland, Jan. 1, 1864 the son of Jonas and Esther Putnam Vaughan he was educated at Westbrook Seminary, taught at intervals and graduated from Medical School of Maine in 1889.

Soon after this he settled in Skowhegan but having already attracted attention by some papers on nervous diseases, he was called as assistant superintendent at the State Hospital at Augusta. His services there were so highly valued that upon the enlargement of the Eastern Maine Gen. State Hospital he was elected assistant superintendent of that celebrated institution and served also for four years as superintendent.

Dr. Vaughan, as one of his friends informs me, wrote very excellent reports which show a scholarly grasp and understanding of his specialty. Aside from those reports we have not been able to find any other papers.

He established a private sanitarium for nervous diseases at Portland, and later at Yarmouthville, until the opening of the war. His services in connection with the great war consisted in acting as a Naval Surgeon in charge of recruits bound overseas in 1917-18 and later on he was inspector for the Shipping Board in N. Y. Harbor. Finally, he became associated with a wholesale Pruggist firm in Portland, and was still

in their employ at the time of his death.

Dr. Vaughan was a man of very pleasing personality, agreeable as a conversationalist and when at the summit of his skill as an alienist, he enjoyed a very high reputation.

He married Jan. 3, 1894, Miss Mabel Wentworth, daughter of George and Julia Whittier Wentworth of Skowhegan, and is survived by her and by two married daughters.

**Charles Dennison Smith
Portland 1855-1925**

Few physicians have left so wonderful a record in medicine as our late comrade whose name stands above this brief eulogy. He was an active member of our Association for years, read before its meetings good papers on "Fractures" and on "Apollectic Cysts," spoke attractively concerning papers read on the programs of our meetings, was its Secretary for many years, and in that position aided many a presiding officer to carry on the meetings to good results, and edited and saw through the press many volumes of our yearly transactions, furnished with a careful index.

As if all this were insufficient proof of his devotion to medicine, he also served as necrologist of the Association and wrote many delightful biographies of deceased members. And last of all he was for years President of the State Board of Health and from his chair he issued to be read before our Association, yearly bulletins concerning the health of the entire State.

During this period of his labors for medicine, he was city physician in Portland, served as Interne and Pathologist

at the Maine General Hospital, was on the staff of instructors of the Portland medical school and of the Bowdoin medical school, as well as professor of physiology and physician at the hospital. He obtained in Portland a good practice, and as has been abundantly shown, he was a leading member of our Association, and amongst Maine physicians.

With the death of Dr. Charles Oliver Hunt, the first superintendent of the Maine General Hospital, Dr. Smith took up the reins of office and has labored within its walls just as steadily and just as faithfully as he before has labored as an official and member of our Association. In spite of lack in funds to carry out modern schemes of surgical and medical advances, he labored successfully in this position the remainder of his life, retiring in 1924 after twenty-two years of steady labor, broken only by a short vacation once a year in his motor car tours through New England scenery.

If there is one outstanding feature of hospital success connected with the administration of Dr. Smith it was his, with the typhoid fever patients from Chicakuaga camp during the Spanish war. Arriving here in shocking condition, many of these hopeless soldiers were finally brought back to health.

In the brief space given to us for a notice of Dr. Smith, we can only touch on such other salient spots as his membership in the Fraternity club, to which he contributed valuable papers and keen remarks in discussion of others; his membership of the Portland Natural History society with its connected love for our outdoor life, birds and minerals; his

attachment to Maine medical history into which he was introduced by his position as necrologist and finally, his devotion to the Lister Club of Portland of which he was a founder and beloved member.

His one great regret in life was the dismemberment of the Bowdoin medical school, of which he was a successful teacher, and lecturer. With a clear voice and clean cut elocution he spoke vigorously on his chosen theme of physiology, so long as the school endured.

Charles Dennison Smith, the son of Lewis and Julia Smith, was born in Portland November 8, 1855, his father being well known as a citizen of Portland connected with the Customs House for years. Dr. Smith was educated at Colby, where he obtained his Degree of A.B., and afterward of A.M.; and at Bowdoin where he was graduated as physician in 1879. He married Miss Albertina Morse Means of Portland and is survived by her. Two or three years before his death he suffered some injury in an elevator, but was apparently as well as ever, until about a year before his death, when cardiac symptoms supervened and after a year of suffering he departed from amongst us Sunday, October 11, 1925. He was indeed a man of mark, and so deserving to be noted as a remarkable man in the ranks of medicine in Maine. His record was clean, honest, efficient. Putting his hands once to the plough, in all that he began he never looked back, but always forward to his goal of doing all things well.

New and Non-Official Remedies

Continued from Page 16

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It is not only very interesting reading but deals with facts which all Medical men should know. It should be on his Library Table and could well be recommended to his patients.

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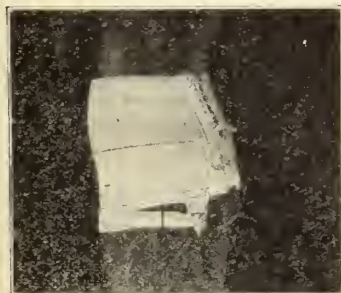
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THEOLOGY vs. MEDICINE

We take pleasure in telling a golf story now and then, especially when it hits off the doctors, as, for instance in this way.

The village vicar and doctor were walking sedately home from a round of golf, and the vicar, after much silent meditation, broke out with this quaint remark.

"I shall never succeed in beating you, my good doctor."

"Never mind," said the good-natured, victorious physician, "you will win in the long run, for you will be burying me, some day."

"Even then," replied the parson bitterly, "it will be your hole."

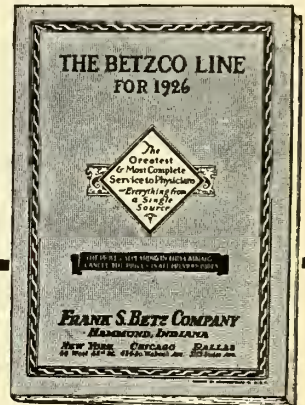
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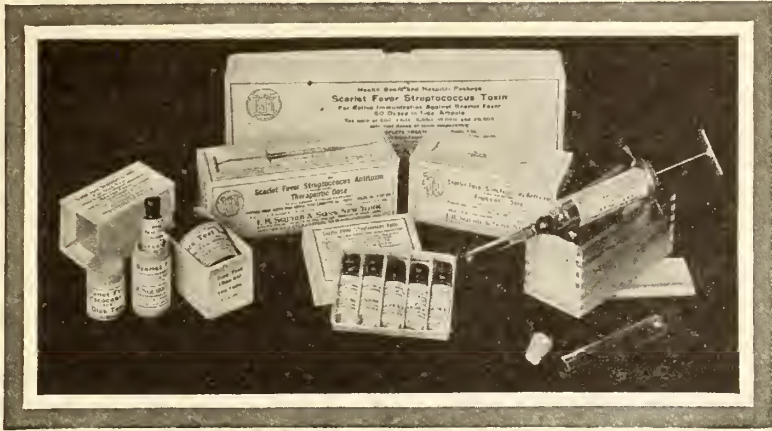
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VOL. XVII, No. 2

FEBRUARY, 1926

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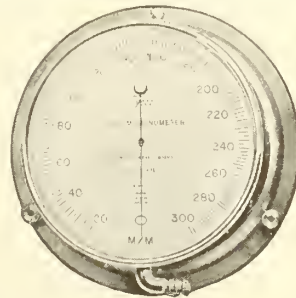


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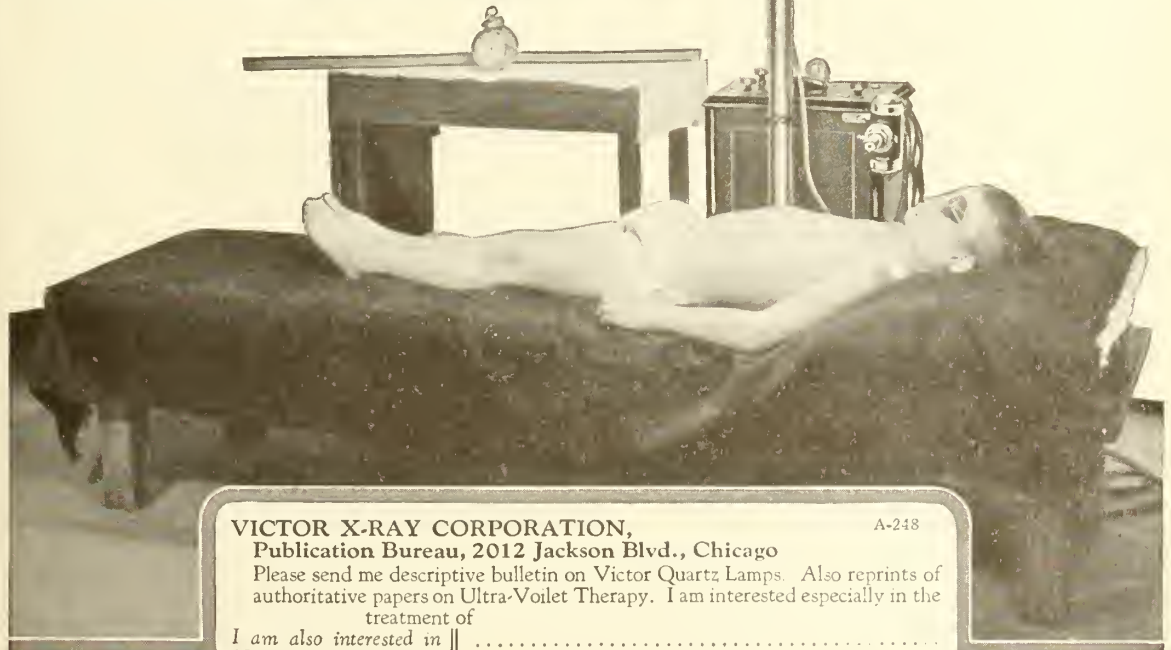


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Mercurosal is an organic synthetic preparation of mercury, freely soluble in water and having no coagulating effect on blood serum. The intravenous method of administering Mercurosal is painless and does not injure the vein.

Its spirocheticidal effectiveness has been amply proved by scientific investigation. Dr. O. M. Gruhitz, in the *Archives of Dermatology and Syphilology* for April, 1925, reports that the syphilitic lesions in rabbits utilized in his tests were cleaned up by a single intravenous injection of 10 to 15 milligrams of Mercurosal per kilo of body weight; that a dose of 5 milligrams per kilo had the same effect in an average of less than three injections in four days; and that a dose of 3.0 to 3.5 milligrams per kilo rendered the lesion spirochete free in $7\frac{1}{2}$ days, on an average, with three doses.

At the rate of 3 milligrams per kilo of body weight, the dose for a patient weighing 68 kilos (150 lbs.) would be approximately 0.2 gram, to be administered at three-day intervals for twelve to fifteen injections. Treatment should be begun with small doses, to determine the susceptibility of the patient toward mercury. If no hypersensitiveness develops, subsequent injections may be rapidly increased until 0.2 gram is being administered at a single dose.

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FEBRUARY, 1926

No. 2

*OBSERVATIONS ON TREATMENT OF SYPHILIS.

By B. B. FOSTER, M. D., Portland, Maine.

The observations that I am making in this paper are based on the case histories of 250 patients, picked at random from the chart box of the venereal disease clinic at the Maine Eye and Ear Infirmary. This clinic was opened in 1918. During the year 1924 there were 2,061 treatments given, 1,265 to females and 796 to males. There were also 65 intraspinal treatments. The preponderance of females over males in this clinic may be accounted for partly by the fact that the males are the wage earners and can afford to employ a private physician and partly because the females seem to be more conscientious and wish to be cured.

Although this disease is divided into early and late syphilis ordinarily, it will perhaps bring out a salient fact to cite these patients in three stages. Of these

250 patients, five appeared at the clinic with an early primary sore, twenty were in the secondary stage and 166 were in the tertiary stage. The remainder of the patients, to the number of 59, were congenital syphilitics. If the congenital cases are excluded, over 80% of the patients in this clinic have tertiary syphilis. A perusal of the case histories of these tertiary syphilitics shows that often these patients have received a very short course of treatment over a very limited period, with a statement in some instances by the physician himself that this treatment has been sufficient for a cure, or that the patient himself, on the disappearance of his symptoms, has decided that he was sufficiently cured. It is surprising how large a number of these late cases have no history of infection, and very often I believe that the

*Read before the Bar Harbor Session of the Maine Medical Association.

patient's statement is true. Often the patient's infection has not been discovered over a period of months or years, although many physicians were consulted about vague symptoms simulating visceral disease, rheumatism, neuritis and the diminishing of function of one or more of the special senses. Early syphilis in a healthy person is not a difficult disease to control, providing the person has no idiosyncrasy for arsenic. To accomplish a cure, it is necessary to follow the doctrine of Fournier, "strike hard, quick and often." A person suffering the general systemic infection of the secondary stage requires the same intensive treatment, with reservations depending on reactions. In the third stage the treatment should be individual, method and drug depending upon the physical condition of the patient, or the treatment may prove more serious than the disease itself.

The therapeutic triad, arsenic, mer-

cury and potassium iodide, has been augmented by the addition of bismuth. From the voluminous and excellent reports it would seem that bismuth is proving more potent than mercury, but not so much so as arsphenamine. The treatment of syphilis is more or less standardized, and all of the late works on this disease go into the treatment very thoroughly. Judgment of drug dosage and frequency of administration for each individual patient can only be acquired by experience.

The clinic case record cards, when properly filled out, are of much value, as one may at a glance learn the patient's clinical and serological history and previous treatment. When a patient becomes sensitized to arsenic a red star is attached to the card.

The treatment histories that Dr. Warren will present will show that the quantitative Wassermann test is of great value in prescribing treatment.

***THE QUANTITATIVE WASSERMANN AS A GUIDE IN THE TREATMENT OF SYPHILIS.**

By MORTIMER WARREN, M. D., Portland, Me.

In its application the Wassermann test has two functions, one diagnostic, the other therapeutic. To this therapeutic function I wish to call your attention in considering the quantitative Wassermann as a guide in the treatment of syphilis.

As practicing physicians you are not interested in the technique of such a test, but rather in the information obtained by its use. What little I shall have to say about the test itself is by way of introduction to a better understanding of its actual use.

*Read at the meeting of the Maine Medical Association, Bar Harbor, Me., June 24, 1925. From the Venereal Clinic of Dr. B. B. Foster, the Maine Eye and Ear Infirmary and the Laboratory of the Maine General Hospital.

The Wassermann was originally conceived as specific complement fixation by the spirochete *pallida* through the medium of immune bodies in the blood or other fluids of persons infected with syphilis. Investigation soon demonstrated that the actual spirochete or their products were not essential to the process. The fixation of complement which does obtain, and fortunately did occur in the initial experiments of Wassermann and his co-workers, is due to as yet unknown factors. These factors are not peculiar to individuals who have syphilis, but occur more regularly and in larger amounts. The Wassermann, then, is empirical and its present day development is the result of the selection of methods based on sound technical principles which have proven by actual experience to yield specific diagnostic information in the clinic.

The usual notation of a Wassermann report is by the positive or negative signs, graded from — to 4+. This is to a limited degree quantitative, but there is a certain value in knowing more accurately the degree of fixation under treatment, particularly in the so-called "Wassermann fast" cases as emphasized by McNeil¹ among others.

The quantitative test, the results of which are shown on the charts, is that of Kolmer². Kolmer has carried out an exhaustive study of the Wassermann and developed a standardized method which is in more general use than any other one. From this do not infer that other modifications may not be as reliable, but the evidence is that no system is more so. One readily appreciates the

individual preference a worker may have for some special method with which he is familiar. So there are other quantitative tests which yield the same comparative information in following cases under treatment.

The charts³ show—the amount of fixation with each dosage of serum used, from 0.1 c.c. to .0025 c.c. in vertical columns under year, month and day, also the individual tests in the conventional notation just below. The treatment is indicated in decigram dosage of arsphenamine; in ordinary type when neo-arsphenamine and heavy face type when sulph-arsphenamine was used. The treatments were intravenous unless otherwise noted. Bismuth is indicated in decigrams per month, mercury in grains per total amount.

SUMMARY.

In charts 1, 2 and 3 is represented a family; in 1, father, in 2, mother, and in 3, daughter, ages thirty-seven, thirty and fourteen respectively. The father and mother are constitutional syphilitics without symptoms. The diagnosis was made on the discovery of interstitial keratitis in the daughter. The father's probable infection occurred some seventeen years ago.

Chart 1 shows the subsidence of the Wassermann under persistent treatment with tendency to recur. A break appears to follow the shift from neo-arsphenamine to sulph-arsphenamine.

Chart 2 shows an apparent effect by discontinuance of treatment in establishing a negative Wassermann. This patient showed mild signs of Hyperthy-

II	1924								1925	
	5	6	7	8	9	10	11	12	1	2
	14	18		13		30			7	14
.1	2	—		4		2			—	—
.05	2	4		4		—			—	—
.025	2	4		4		—			—	—
.005	—	—		—		—			—	—
.0025	—	—		—		—			—	—
+	3	4		4		1			—	—
Ars.	6	4	3							
	6	4								
	6	3								
	7									
Bis.										
Hg.										
KI										

6.6 gr. mouth

III	1924															
	5	6	7	8	9	10	11	12	1	2	3	4	5	6		
	15	29	18		.6	10	17	15	5	10		4		3		
.1	4	4	4		4	4	4	4	4	4		4		4		
.05	4	4	4		4	4	4	4	4	4		4		4		
.025	4	4	4		4	4	4	4	4	—		4		4		
.005	—	4	—		2	4	4	—	—	—		—		—		
.0025	—	3	—		—	—	1	—	—	—		—		—		
+	4	4	4		4	4	4	4	4	4		4		4		
	5	6	4	3	3*	3		35	3							
	6		4		3			35	3							
	5		3		3			35								
			3		3			3								
								3	3							
Bis.																
Hg.									8	9	3	1	3	4	4	

6.6 by mouth

* Intra muscular

	1923	1924								1925								
IV	7	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5
	25		27								30		4	7	1	29	1	3
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*THE SIGNIFICANCE OF PROCTOLOGY AS A SPECIALTY

By RALPH W. JACKSON, M. D., F. A. C. S., Fall River, Mass.

I had expected, as an official delegate from the Massachusetts Medical Society to the Maine Medical Association, simply to bring to the meeting at Bar Harbor greetings from my adopted to my native state. Maine, to the best of my knowledge, has few or no proctologists, and when your secretary requested me also to present a paper, I accepted it as an opportunity to do a little missionary work for a specialty which has been uppermost in my thoughts as well as a means of livelihood for the past fifteen years. So far as I have been able I have endeavored, by work and office in the American Proctologic Society and in the Section on Gastro-enterology and Proctology of the American Medical Association, to promote the ethical growth of proctology, and hope that I may be able to do my bit here.

Endeavor to attract men to take up proctology as a specialty is no effort to foist a new specialty on the profession,

but is rather an effort to awaken its members to the opportunity of doing ethically what has been done unethically for years with astonishing success in some parts of the country, particularly the Middle West. There thrive numerous proctologists and firms of proctologists who brazenly advertise their wares which, sad to relate, are often better than the public can purchase from the regular profession; and from there also emanate most of the peripatetic teachers who occasionally invade New England, gather into their classes practitioners of more or less shady repute, and impart to them, for substantial consideration, wonderful proctologic secrets, which, on investigation, prove to be only matters of common knowledge to the well-trained, legitimate proctologist. No doubt many of you have received the advertising matter of one particularly notorious traveling teacher of this kind, who hails from Ohio and guarantees great increase

*Read at the annual meeting of the Maine Medical Association, Bar Harbor, June 23-25, 1925.

in your income if you will buy the methods he has to sell and then use them in your practice. So profitable has all this become, that within the past two years an organization has been found, known as the "American Academy of Ambulant Proctologists," which is growing remarkably; and within the past year one of its officers has published, at an exorbitant price, a book entitled "Ambulant Proctology," which for crudity, absurdity and rank commercialism I recommend for your perusal. There can be but one inference, that the regular profession is not giving, and never has given, the public all that it ought in proctologic service, which the itinerant quack pile doctor recognized years ago, and which the above mentioned irregulars and teachers are now likewise recognizing and taking advantage of more systematically.

Approximately twenty-five years ago a small number of regular practitioners, recognizing this condition and disgusted with it, banded themselves together under the leadership of such men as Mathews, Tuttle and others, whose names are familiar to every proctologist, to awaken the profession to the need of better proctologic work in its own ranks. That organization, the American Proctologic Society, has prospered and done notable work in advancing the interests of the legitimate specialty, and will continue to do so. Less than ten years ago further impetus was received when, after a rather hard fight in the House of Delegates, the American Medical Association recognized it by establishing its Section of Gastro-enterology and Proctology,

now one of its most active sections, whose possibilities for advancing the interests of the specialty are unlimited, if the gastro-enterologists do not monopolize too much of the programs. The American College of Surgeons, too, recognizes proctology as one of its classifications, and admits to its fellowship properly trained men in that line. All of these agencies tend in the right direction, and are attracting more and more men to seek instruction in proctology and make it their calling; but they are inadequate, without more unselfish missionary spirit on the part of those already practicing it, to combat the quackish competition, which no other specialty, unless it be urology, has ever had to meet. Because New England has so few men practicing proctology exclusively, either ethically or unethically, the profession here does not appreciate the prevalence of this competition elsewhere in the country.

Proportionally the English medical profession is in advance of the American in its recognition of proctology as an important subject. Two hospitals in London are devoted exclusively to rectal work, one of them founded ninety and the other forty years ago, and the like of them is not found elsewhere in the world. With proctology in Britain are associated the names of Allingham, Cripps, Goodsall, Ball and others familiar to every one practicing the specialty, and to them and their worthy successors have gone many Americans for instructions. At the annual meeting of the British Medical Association, at Bradford, which I was privileged to attend

last July, one of the sessions of the Section on Surgery was entirely in the hands of the proctologists. The Royal Society of Medicine in London, an organization which has no exact counterpart in this country, has a special Section on Proctology, and with it, also, last July, twenty fellows of the American Proctologic Society, after a trans-Atlantic trip, held a joint meeting, certainly to the profit of the Americans, and it is for the Englishmen to say whether it was to their profit also.

Certainly on both sides of the water there has been definite recognition of proctology as a special field of work, but the average general practitioner, who has given little thought to the subject, scarcely sees the need of it or realizes how much more satisfactory work can be done for his patients with ano-rectal pathology than he is doing. Frankly, he dislikes the work—why, I have never been able to understand—and neglects it. No wonder that, where there are no specialists in this line, the patients travel from one practitioner to another seeking relief, and that, where there are specialists, he travels to one of them, perhaps an irregular, and finds what he is seeking. There is definite need of proctologists here in New England and the profession needs conviction to that effect. Perhaps my remarks may engender a little of it.

Let us see just what proctology means. Because the American Medical Association created the Section on Gastro-enterology and Proctology, one must not infer that the latter specialty is merely the tag end of the former. It is far

from being such, and that was exactly the thesis which I endeavored to maintain in my address as chairman of the section at Atlantic City last month. Proctology is essentially a surgical specialty with some medical aspects, and is fully as often correlated with other specialties as with gastro-enterology. These correlations are brought about through anatomic proximity, blood and lymph channels and neural connections; and I called attention to the frequent association, by these means, of proctology with gynecology, urology, pediatrics, orthopedics, dermatology, neurology and tuberculosis. Were I to go into all these correlations, some interesting matter might be presented to you, but there is no time for it, and it is not exactly the object of this paper. It will be sufficient to quote only two of them and refer you to the address for the others.

“ORTHOPEDICS—I have been so situated that I have seen perhaps more than my share of the possible correlation of proctology with orthopedics. Some years ago, a case was referred to me which, so far as I know, is the only one of the kind which has ever been reported. A young man with chronic tuberculous hip disease had developed a most complicated ano-rectal fistula. Stereoscopic roentgenographic studies of the sinuses with bismuth paste demonstrated that a septic process had started from the anterior surface of the joint capsule, followed the sheath of the iliopsoas upward under Ponpart's ligament into the iliac fossa, there forming an abscess; had then gravitated downward above the levator and ruptured into the

rectal ampulla; and had also penetrated the levator, traversed the ischio-rectal fossa and ruptured externally. Though this had been the course of the original infection to the rectum, it was my suspicion that a retrograde infection from that organ, through the same sinuses, was keeping up the hip disease, and this suspicion was confirmed by the fact that operation on and cure of the proctologic condition cleared up for good the orthopedic condition. Another exactly similar case, with the same result, has been under my care within the past two years. Another illustrative case is that of a lawyer with a definite arthritis of the lumbar spine and some vague rectal symptoms, which proved to be due to a small blind internal fistula. Drainage of this promptly put a stop to the spinal disease, a plain case of focal infection. Furthermore, the cause of chronic backache, so often puzzling as to etiology, is frequently to be found in rectal and intestinal conditions, and corrected by correction of them."

"NEUROLOGY—We might think of this as one of the less likely correlations, yet no class of symptoms, unless it be genito-urinary, produces more profound effects on the nervous and mental condition of the patient than does proctologic discomfort. The hypersensitiveness of the ano-rectal region has already been mentioned, and we have many proofs of the results produced through neural connections. I am constantly seeing patients with some degree of neurasthenia which is traceable to sphincteric hypertension and spasm, in whom systematic dilatation of the anus, and in the more

extreme cases incision, gives prompt relief. Such an instance was that of a clergyman with an ensemble of nervous and physical symptoms nearly incapacitating him from application to his work. This was coupled with a vague but persistent tenesmus, and he was speedily and entirely relieved by dilatation. The sphincteric spasticity and agonizing pain growing out of a tiny anal fissure is but an aggravated form of this same thing. This is often not recognized by the general practitioner, and has led to almost suicidal mania. Rarely neurologic results come from proctologic pathology through other than neural connections. Illustrative of this was the case of a club restaurant waiter, who had developed a spastic-ataxic gait, general myoclonus, and other symptoms involving both lower extremities. He had been examined by an excellent neurologist, who diagnosed a transverse myelitis involving the cord up to the level of the fourth sacral roots, and felt that it, in the lack of other apparent cause, was in some way due to a history which the patient gave of prolonged anal bleeding at the time of the inception of the neural symptoms. I was asked to examine him and found marked internal hemorrhoids, on which I did a radical operation. He had been in a serious condition, but there was immediate improvement and eventual recovery. The neurologist has reported the case as one of extreme rarity, and his conclusion was that the cord changes were probably nutritional, due to the free anastomoses between the hemorrhoidal and spinal venous systems, and blocking of the latter by emboli from the

former, or were possibly the result of infection transmitted through the same channel. It would seem that this conclusion can hardly be gainsaid."

Again let us see just what proctology means, and have an exact definition of the extent of the field. Some of the fellows of the American Proctologic Society practice proctology and some of them procto-enterology. My personal concept of true proctology is infra- and intra- rather than supra-pelvic work. It is in the two former, and not in the latter, that the need exists for betterment, that the irregulars are making such success and that regulars can do the same. There are enough good abdominal surgeons, whose work they cannot surpass, but not nearly enough good men in the field of true proctology, wherein they can easily surpass. I have no serious objection to any one in the specialty reaching as high in the alimentary tract as he sees fit in his personal practice, but I feel that he is a truer specialist if he invades the abdomen only in case of necessity arising in infra- and intra-pelvic pathology; and that, by so doing, he will incur less antagonism from the surgeons and be more likely to secure their recognition of his superiority in the lower field, which it is not difficult to prove they have little interest in, neglect, and often make a mess of it. It is this which is the *raison d'être* of proctology as a specialty.

Perhaps you may be inclined to question my assertions of the shortcomings of the profession in proctology, but primarily the fault is not with the individual but with his training. Of all

the medical schools in New England, only one has a course in elementary proctology, and similar conditions exist the country over. There are more graduate than undergraduate schools giving instruction in this line, but this is not beginning early enough. A graduate enters immediately an internship in some hospital. He frankly admits his lack of instruction in proctology, and the interest he often shows when properly taken in hand is surprising. But what does he usually meet? The hospital has no rectal service, and the general surgeon over him has no interest in such work and passes over to him as unimportant the rectal operations to do. He is confronted with work he knows nothing about, and the results are a misfortune to the patients and a discredit to the hospital. I have found this particularly true of two of the best hospitals in Boston, and, were I to go into the details, you would be somewhat surprised. Such things happen in Massachusetts, but perhaps not in Maine. The general surgeons should master the field and take more interest in it, or better, the hospitals should establish rectal services if they can find men to fill the positions.

Take the field of perirectal suppurations and sequences alone, and you have in the words of Mr. Edwards, President of the Section on Proctology of the Royal Society of Medicine, almost "a specialty within a specialty." The manifestations of ano-rectal fistula are multi-form and require accurate study, but do not get it, for over forty per cent. of operations on such pathology in general

hospitals are confessed failures. In reference to the correlation of proctology with orthopedies, I have already referred to one difficult case, but let me recount another, which may strike home. A young French Canadian from New Brunswick, a lumber man, fell on a ragged stump with sharp spikes of wood, and received a penetrating wound just behind the anus. A suppurative process developed, which persisted in spite of five operations at St. Stephens, Bangor and Boston, the last by one of that city's very best general surgeons. Finally the case was referred to the writer. He carried a septic temperature, had lost weight and was generally in poor condition. The whole posterior commissure of the anus was destroyed by his operations and apparently healed, but close examination revealed a tiny opening, into which a long flexible probe passed upward in front of the sacrum. Methylene blue in peroxide was injected until the color was observed coming down in the rectum from above, and then careful proctoscopic search revealed a small funnel-shaped opening in the posterior rectal wall six inches above the external anal margin, and from this the color was oozing. Cure of such a fistula could only be accomplished by complete incision from the lower to the upper opening, a thing impossible with the knife on account of the danger of hemorrhage from the superior hemorrhoidal artery, and possible without that danger only by the seton method. Effort to pass a probe from the lower out through the upper opening proved useless, and the process was then reversed and a hooked probe

was passed through a proctoscope into the upper, the lower having been enlarged to admit a pair of forceps to catch this probe. It proved to be a most difficult procedure, but was successful, and the probe was pulled down, followed by a tape threaded through its eye, and with this a heavy gauge silver wire was pulled through. The wire was then twisted, a little more each visit to the clinic, until after two or three weeks it cut its way out. The mass of tissue cut through was at least three-quarters of an inch thick and from three and a half to four inches longitudinally, but no severe hemorrhage resulted from the pressure necrosis. The result was a wide deep sulcus, which healed by granulation. The patient threw off his septic condition, regained his weight and got well. The process was a posterior proctotomy with a wire seton; and one wonders how much patience the average general surgeon would have with such work, granted that he had made an accurate diagnosis.

Perhaps these rarer problems of true proctology are less convincing of the need of specialists in the field than some of the commoner ones. Let us consider the commonest, viz., hemorrhoids. There is a widespread idea among the laity that pile operations are not permanent in their result, and that the pathology will return. Often the patient will ask, when operation is advised, "Will they come back?" I am afraid this idea is somewhat well founded; and why? Hemorrhoids are essentially plexuses of varicose veins, and any incomplete removal of them, with continuance of the causative factors obstructive to the re-

turn circulation, does threaten dilatation of unremoved portions of the veins, and considerable liability to recurrence sooner or later. The clamp and cautery operation is, with rare exceptions, the one done by American surgeons. Usually each internal pile is pulled down, and, without much, if any, dissection, the prominent part is crushed and burned off. This leaves a goodly portion of the large vessels near the sphincters untouched and liable to further trouble. It is not an inapt comparison to say that this is like an old-fashioned tonsillotomy as compared with a modern tonsillectomy. The former certainly does not cure, while the latter usually does. So an internal pile, with all of its veins, should be dissected out from its base, and up to a sort of pedicle containing the incoming branch of the superior hemorrhoidal artery, and only this pedicle should be clamped and burned off or ligated. I use the clamp and cautery for this purpose, but believe that the ligature method would be followed by less recurrence in most hands, because one *cannot* ligature the whole mass as he might clamp it, and must do a certain amount of dissection before the ligature can be applied. In short, and if I may be allowed to coin a term, a hemorrhoidotomy is not a cure while a hemorrhoidectomy should be. One is tempted to say much more about ordinary hemorrhoidal surgery, such as the fact that the Whitehead operation, with its attendant dangers, is almost never justified or resorted to by proctologists; but time does not permit of further diction along these lines.

Probably the proctologic faults of the general profession are even more often those of diagnosis than those of technique. A negative diagnosis of hemorrhoids is usually rendered because they cannot be felt; whereas, because of their compressibility, palpation is absolutely inadequate, and only inspection is adequate for such a verdict. I will make a diagnosis of hemorrhoids only after seeing them strained out, protruded after an enema, or through an anoscope, and this does not mean a bivalve speculum, which obliterates everything. Had this been recognized and properly done by the draft boards during the war, not so many of our boys would have been sent over seas to occupy, for hemorrhoid operations, beds which should have been devoted to battle casualties. This is authoritative on the evidence of fellows of the Proctologic Society who were in the army. It is interesting to quote the following from the presidential address of Dr. C. A. Porter, two or three years ago, before the New England Section of the American College of Surgeons: "It is appalling how many cases of cancer of the rectum are diagnosed as and occasionally operated on for hemorrhoids, without even a high rectal examination." I may say that this is no joke but a real fact. The insidious onset of cancer in the rectum is proverbial, and the growth often reaches very material size before it is recognized. Such a growth, by pressure on the venous trunks, is often an actual cause of hemorrhoids. The careless examiner finds the latter, and, forgetful of the fact that the vast majority of rectal cancers can be reached by

digital examination, doesn't even make that as high as he can. He then operates on the hemorrhoids, and perhaps doesn't even discover the growth during the operation. The growth then continues to develop, and, when discovered, the operator is in for a blasting and not a blessing from his patient, and he deserves it. One should remember that a hemorrhoid operation is always an opportunity for a higher examination of the rectum.

Apropos of what has just been said, I am going to quote at length from the annual discourse before the Massachusetts Medical Society only two weeks ago: "In the period from 1920 to the present, sixteen patients with carcinoma of the lower bowel have come under observation. Not one of them could be classed as in an early stage. Every one of them had applied to a physician, complaining of pain or bleeding or obstruction, or seeking relief from what they considered to be hemorrhoids. In exactly four of these cases did the physician make an examination to determine the diagnosis. In some instances numerous office visits were made, and in one case three physicians were consulted, in turn, before an examination was done. It is true that an instrument of precision was necessary, the most perfect, the most complex, the most infallible ever devised, but one with which every physician is provided and the technical use of which he is well skilled in. It is the right index finger! In every case a plainly to-be-felt tumor was within easy reach of the examining forefinger. Neither the law nor common sense re-

quires that a physician shall exercise knowledge and skill beyond the average standard in his calling, but no sophistry can justify such negligence as this. Let every mitigating circumstance be taken into consideration, lack of time, diffidence on the physician's part, reluctance on the part of the patient to submit to examination, and the fact remains that gross neglect has been shown." This is some indictment coming from a non-proctologic source, and from such a man as Dr. David Cheever.

It it be admitted that there is need of better proctologic knowledge and practice, and of proctologic specialists, what are the opportunities for the latter? In all New England, more densely populated than most of the country, and with dozens of cities of from fifty to one hundred and fifty thousand or even more of population, there are outside of Boston only four cities, so far as I know, where men are doing proctology exclusively and seeking the reference of such work from the profession; and there is no reason to doubt that the same condition exists the country over. Providence, the city of second size, with a population of nearly three hundred thousand and a tributary territory of at least half that number, has but one doing only proctology. Two or three such men, commanding the respect of the profession, would find there a profitable field. Any one of the cities of fifty to one hundred and fifty thousand could well support one; and even lesser and more remote communities, which are important business and railroad centers, could do the same. They draw from their tributary

territory patients seeking first-class advice in surgery, medicine and the other specialties, and why not in proctology? The rest of the country is no different from New England. I believe that I have underdrawn rather than overdrawn the opportunities these cities offer, and that they are beckoning for men to grasp them, if the prejudices of the profession can be overcome and the laity informed that there is such a specialty.

Nor is this pure idealism. It is practical as well. It is not enough to prove that these communities need better proctologic service, but will it pay good men to go to such places and fill the demand? Most of us must consider this phase of the matter, and I answer unquestionably, "Yes, they will 'make a go of it'." It is axiomatic that, barring some special opening which a young medical man may find in a large city, he gets to earning a competency more quickly the smaller the community where he locates. It is also true that he reaches his limit more quickly the smaller the community where he locates. I am not, however, advocating rural districts for beginning proctologists, but prosperous medium-sized places, where the limit is broad enough to satisfy any reasonable man; where, though their fees may not reach those of metropolitan specialists, the margin over and above their much smaller overhead is just as great or often greater than of those who practice in New York, Chicago or San Francisco, and where living is often more pleasant. It is more satisfactory to many to lead in a smaller community than to follow

in a larger one, and there is real truth in the old comparison between the frog and the size of his watery habitat. Therefore it is to be hoped that not every proctologist, on emerging from his preparation, will locate in a large city, but will go where he is most needed.

In conclusion, I have to thank my audience for its tolerance in listening to me and to the repetition of some things which I have said elsewhere, but which have probably not come to your notice. Such repetition is with the aim of advancing proctology and in accordance with my belief, with Dr. Cheever, that "Specialism has attended the vast increase which characterized every field of knowledge in the nineteenth century, in medicine in common with others. Without it the progress of the sciences and the art of their application would have been set back a hundred years. It is an integral part of the evolution of science, and as impossible to be combated by the medical fundamentalists, as is the truth of organic evolution by William Jennings Bryan. It is unfortunate that some commentators assume that the general practitioner and the specialist are mutually incompatible, whereas in reality they are clearly complementary, and each is essential in medical practice." This is as true of proctology as of any other specialty, and I shall feel well repaid for my effort to present something of its significance, if I have aroused interest therein and perhaps attracted to this old, yet new, field of work a few recruits, who will help to prevent its passing into the hands of the unethical.

THE TREATMENT OF ACNE VULGARIS WITH THE X-RAY

By W. E. FREEMAN, M. D., Portland, Maine.

The purpose of this paper is to outline a method of treating acne, the results of which have been excellent in the hands of many dermatologists.

In order to deal properly with this disease, let us review it from the point of general medicine, as well as from that of dermatology, for the external treatment in any form must be combined with the medical care of the patient.

DEFINITION.

Acne vulgaris is an inflammatory disease, often chronic, of the sebaceous glands of the face, shoulders and upper trunk, consisting of papules, tubercles, and sometimes nodules and pustules, or a combination, and commonly found between puberty and thirty. (Stelwagon.) The disease may also involve the lanugo hair follicle, with folliculitis and perifolliculitis.

ETIOLOGY.

The existing cause, according to most authorities, is a local infection of the sebaceous gland and duct, due to the acne bacillus described by Gilchrist, Unna and Sabouraud, with the staphylococcus as a secondary invader, especially in the pustular and indurated forms. (Jackson.)

Predisposing factors of no less importance are: 1. Seborrhœic condition of the scalp or the face. 2. Digestive errors. 3. Menstrual disorders. 4. Circulatory disturbances and anemia. 5. Lack of exercise and loss of sleep seem

to lower the vitality as do abuses of the nervous system, notably from sexual debauch. The erythematous form is worse at the menstrual period and is usually associated with amenorrhœa. Here there may also be hypercemia of the face. The disease may be absent between periods. 6. The comedo is an important factor in the production of many papules, but is not essential. According to Unna, the comedo is caused not by the plugging of the sebaceous glands by extraneous matter, but results from the exfoliation of the follicular epithelium, together with an over secretion of sebum, the former preceded by hyperplasia of the epithelial cells, caused by the inflammation set up by the acne bacillus. G. M. MacKee seems to support this view in explaining the action of the X-rays in this disease. They inhibit cell division and sebaceous secretion and have possible direct or indirect action on the bacteria.

Most dermatologists and radiologists of the present time agree that X-rays are a specific for acne vulgaris. (Mackee.) Stelwagon and Jackson also endorse their use in this disease.

SYSTEMIC.

All authorities lay stress on the abstinence from the use of pastry, soda water, ice cream, chocolate, rich foods, gravy, oatmeal. In the anemic patients iron and arsenic are indicated. The use of alcohol, tea and coffee and spices is interdicted in the hyperemic cases. Besides proper foods, constipation has

often to be corrected. In many patients proteins are not properly assimilated, shown by an increased amount of indican in the urine. Engman is a strong advocate of vaccines of acne bacillus and staphylococcus, either stock or autogenous, along with the other treatments. **TOPICAL TREATMENT WITH THE X-RAY.**

It is not safe to use the usual stimulants, as sulphur, mercury and recorsin, with X-ray treatment. However, opening pustules and expressing comedones hastens the progress in a given case, although the X-rays take care of both. Mackee does not advise the use of ultra-violet rays when the patient is receiving Roentgen therapy. Eugene F. Traub, New York, and others advocate, on the other hand, any form of mercury-quartz light in combination with the X-ray as a helpful adjunct. One method is to alternate with weekly treatments, or to use the mercury-quartz or Alpine Sun Light, or any ultra-violet ray machine, after the other treatment is over. The claim is that the mercury-quartz light, by exfoliating the skin, helps to prevent the scarring seen after acne and possible pigmentation and even radiodermatitis.

The types of acne best suited to X-ray therapy are: 1. Comedo. 2. Papular. 3. Indurated. 4. Pustular. The last is the least responsive to the rays, with the exception of the erythematous variety, which is best treated by internal and the usual local remedies. It is most often seen in girls with irregularities of the menses. The favorite local remedy is some form of sulphur as the lotio alba increased in strength, to

which 2% salicylic acid may be added as the case requires.

When a patient begins treatment he is told that twelve or sixteen weekly X-ray exposures are necessary for a cure. His attention is called to scars often overlooked by him until cured, that the X-ray may not be blamed. Sometimes freckles and pigmentation occur and last for sometime after treatment, and a redness in the sites of the indurated and pustular forms may last for weeks. Flare-ups may occur during treatment, as they do with ointments and lotions. One hundred thirty-four patients were treated with the X-ray between July 1, 1922, and 1923 by Eugene F. Traub, N. Y. Ninety-nine of these patients were given over ten treatments and the majority were discharged well.

TECHNIC.

The routine course of treatment consists of twelve to sixteen weekly exposures of $\frac{1}{4}$ skin units to each side of face, and $\frac{1}{2}$ of this dose every two weeks (if many lesions are present) to the central part of the face. The factors are 3 ma., 6 in. spark-gap (or corresponding kilovolts) and an 8 in. distance, 30 sec. and 15 sec. respectively. (Witherbee and Remer.) This formula I change to a 10 in. distance and 100 kilovolts with a sphere-gap machine and 46 sec. and 23 sec. respectively. This is fractional dosage. We measure from the target of the Coolidge tube to the zygoma and protect the eyes, eyebrows and hairline with lead foil.

Irradiation of the indurated form sometimes gives better results with 3mm.

aluminum filter, giving $\frac{1}{2}$ skin unit weekly for four weeks; then $\frac{1}{2}$ skin unit for two treatments; then resume $\frac{1}{4}$ skin unit weekly without filter. The factors used are 5ma., 7 in. spark-gap, 10 in. distance. 3mm. aluminum filter and 1 min., 34 sec.

Advantages of this treatment are speedy and permanent cures, less time and less co-operation on the part of the patient necessary. MacKee mentions 98% cures, much higher than with other treatments. Relapses are uncommon. One of MacKee's patients had a relapse due to chronic appendicitis, diagnosed by radiography and afterward operated on with prompt disappearance of the acne.

SUMMARY.

X-ray treatment, which is the method

of choice in the extensive cases, is supplemented by the opening of abscesses, expression of blackheads, attention to diet and constitutional disorders, proper hygiene of exercise, fresh air, regular sleep and tonics as needed in the individual case, and gives most gratifying results.

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2. Witherbee and Remer. "X-Rays in Treatment and Radiography."
3. Stelwagon. 9th Edition. "Diseases of the Skin."
4. Jackson. "Diseases of the Skin."
5. E. F. Traub, N. Y., Assistant Roentgenologist, N. Y. Skin and Cancer Hospital, Instructor in Dermatology, N. Y. Postgraduate School and Hospital. Reprint from *Medical Journal and Record*, July 15, 1925.
6. Benj. B. Foster, Portland, Maine. Personal Data.

COUNTY NEWS AND NOTES

Androscoggin County.

The regular meeting of the Androscoggin County Medical Society was held at the Dewitt Hotel, Lewiston, Me., Jan. 26, 1926.

The meeting was called to order by Dr. W. W. Bolster, President. Record of previous meeting not read.

Dr. John Hewatt's application for membership was voted upon, and Dr. Hewatt was elected a member of the Androscoggin County Medical Society.

Dr. John Hewatt, pathologist at Central Maine General Hospital, gave a very interesting talk on blood count in diagnosis.

There were present: Drs. W. W. Bolster, E. V. Call, E. F. Pierce, R. N. Randall, B. W. Russell, E. L. Leathers, E. B. Buker, E. C. Higgins, J. E. Dupras, W. E. Webber, W. J. Renwick, W. J. Fahey, H. L. Gauvreau, C. H. Cunningham, J. Sturgis, W. H. Chaffers, S. L. Andrews, W. L. Haskell, D. A. Barrell, John Hewatt, R. A. Goodwin, Geo. E. Desaulniers, L. P. Gerrish, of Lisbon; A. W. Plummer, of Lisbon Falls, and Dr. L. J. Dumont.

L. J. DUMONT, M. D.,

Secretary.

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JOURNAL OF THE MAINE MEDICAL ASSOCIATION

Dr. Frank Y. Gilbert, 148 Park St., Portland, Editor-in-Chief

Dr. James A. Spalding, Portland, Necrologist

Dr. Bertram L. Bryant, Bangor, Secretary Maine Medical Association

Dr. Stanley P. Warren, Portland, Chairman, Board of Councilors

Dr. Clarence Kendall, Augusta, State Commissioner of Health

Dr. C. A. Moulton, Hartland, Chairman Committee on Public Relations

Dr. E. H. Risley, Waterville, Chairman Cancer Committee

Dr. Thomas A. Foster, Portland, Chairman Scientific Committee

EDITORIAL COMMENT

Secretaries and Councilors' Meeting

CONGRESS SQUARE HOTEL,
PORTLAND, ME., Feb. 17, 1926.

Following the custom inaugurated by our State Secretary, B. L. Bryant, soon after he assumed the office, the County Secretaries and Council held their second meeting of this year in Portland, with twenty-three in attendance, representing some eight counties.

The following subjects were introduced: The Workman's Compensation Act as seen by the insurance company and the physician; the report of the chairman, Dr. Renwick, of the Androscoggin County Medical Association Committee on Arrangements for the Maine Medical Association meeting, to be held at Poland Springs, June 10, 11 and 12 (the state program for this date offers a fund of material as submitted by Chairman Richardson, of Skowhegan): reports of activities of the various county societies by their Secretaries, and the Councilors' report of their visits to the various county meetings; the report of the Venereal Committee by its chairman, Dr. George Coombs, of Augusta; C. F. Kendall,

Commissioner of Health for Maine, spoke of the results from educational propaganda in lessening tuberculosis and recognition of cancer, and urged the same kind of propaganda for pneumonia, typhoid fever and other preventable diseases; Secretary Bryant gave a brief résumé of the activities of the A. M. A. in the national field, also what the various committees were doing in the state in interest of the public and the profession.

It was a very valuable meeting to all present.

Present: L. P. Gerrish, President-elect; B. L. Bryant, Secretary; S. P. Warren, Chairman of Council; George Young, John Sturgis, Neil A. Fogg, Councilors; George Cummings, Cumberland, Frederick Carter, Kennebec. H. D. McNeil, Penobscot, C. E. Richardson, Somerset, Secretaries; E. G. Abbott, T. J. Burrage, R. D. Small, E. E. Holt, Jr., J. A. Spalding, F. Y. Gilbert, Portland; George Coombs, Augusta; W. W. Bolster, E. V. Call, John Sturgis, W. J. Renwick, W. S. Garcelon, Lewiston and Auburn, and E. M. McCarty, Rumford.

COUNTY NEWS AND NOTES

Knox County Medical Society.

Twenty members and four guests attended the recent meeting of the society at the Hotel Thorndike, Rockland, January 12th.

After the dinner and business meeting a paper on "Osteopathy" was presented by Dr. James Kent, of Rockland, osteopathic physician. A brief history of osteopathy was presented together with an exposition of the present status of education in the special schools of that class. The several osteopathic physicians in the country confess to the value of medicine, though compelled to employ the services of the regular practitioner, since they are not licensed to dispense in Maine. Members of the regular profession admit that some conditions may be amenable to osteopathic treatment, but, on account of the mystery shrouding this phase of therapeutics, do not find themselves capable of discovering the indications. Criticism of the use of vague and unscientific terminology, such as "lesion" and "subluxation," by the osteopathic physician received no adequate defense or explanation.

The interest of the members of the society was manifest by the attendance of twenty physicians, including Dr. F. F. Brown, of Vinal Haven; Dr. Franz Leyonberg, of North Haven; Dr. C. H. Leach, of Tenant's Harbor; Dr. A. J. Fuller, of Pemaquid; Dr. F. G. Campbell, of Warren; Dr. B. F. Keller, of Thomaston; Dr. H. H. Plumer, of Union; Dr. W. G. LeFurgy, of Rockport; and Drs. A. F. Green and J. G.

Hutchins, of Camden. Of the Rockland members the following were present: Dr. F. B. Adams, W. M. Spear, Wm. Ellingwood, C. D. North, H. W. Frohock, F. O. Bartlett, H. V. Tweedie, N. A. Fogg and C. H. Jameson. Other guests of the society were Dr. Edwin Scarlott and Dr. Harry Pettapiece, osteopaths, and Dr. G. E. Parsons, of Rockland. The members of the Penobscot Bay Dental Association were present at the open meeting and participated in discussion.

The evening was productive of an interesting exchange of ideas, fostering good fellowship and greater co-operation among those present.

HAROLD JAMESON,
Secretary.

Penobscot County Medical Society.

The Penobscot County Medical Society held its regular meeting at the Bangor House, Tuesday evening, January 19, 1926.

Dr. W. D. McFee, Haverhill, Mass., gave an illustrated and a most interesting lecture on "Physiotherapy in General Practice."

Business session at 7.30.

Dinner at 8.00.

The following were present: Luther S. Mason, W. D. McFee, M. D., Haverhill, Mass., Mr. Eno, F. D. Weymouth, Brewer, E. E. Brown, S. N. Marsh, West Enfield, J. L. Johnson, C. H. Burgess, Mr. Bousfield, E. S. Merrill, W. S. Purinton, O. R. Emerson, Newport, J. B. Thompson, Norman Cook,

Continued on Page XIII

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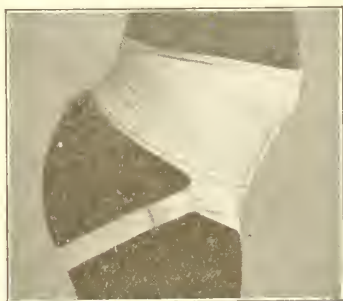
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Continued from Page 42

COUNTY NEWS AND NOTES.

Newport, M. A. Webber, Pittsfield, L. H. Blanchard, Pittsfield, W. E. Fellows, H. G. McKay, Howland, J. P. Russell, So. Brewer, H. W. Sampson, C. J. Hedin, A. W. Fellows, C. B. Popplestone, H. W. Osgood, L. F. Wright, M. C. Moulton, H. M. Goodwin, C. M. Thomas, Brewer, J. D. Clement, W. M. Emerson, C. P. Thomas, Brewer, J. B. Woods, A. K. P. Smith, H. E. Thompson, A. E. Small, F. B. Ames, L. H. Smith, M. C. Madden, Old Town, H. D. McNeil, Prof. J. M. Caird, W. L. Hunt, H. J. Hunt, M. D., H. C. Knowlton, Hampden, H. C. Scribner, Allen Woodcock, Galen M. Woodcock, D. A. Robinson.

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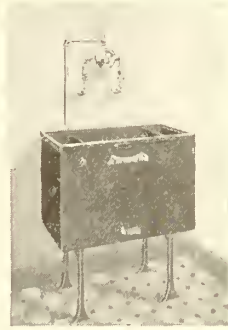
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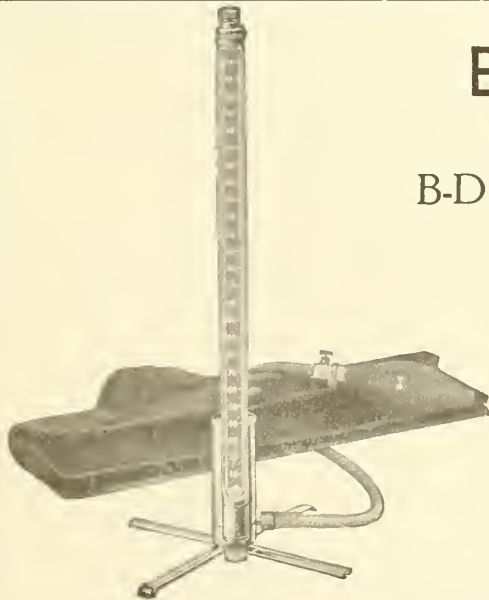


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THE JOURNAL

OF



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The Official Organ of the State and County Medical Societies

VOL. XVII, No. 3

MARCH, 1926

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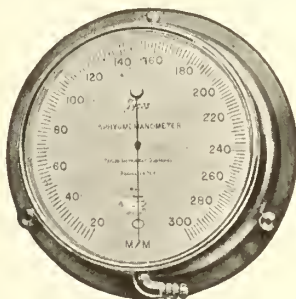
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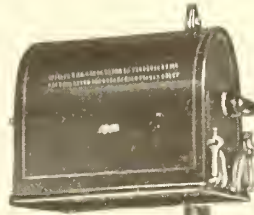
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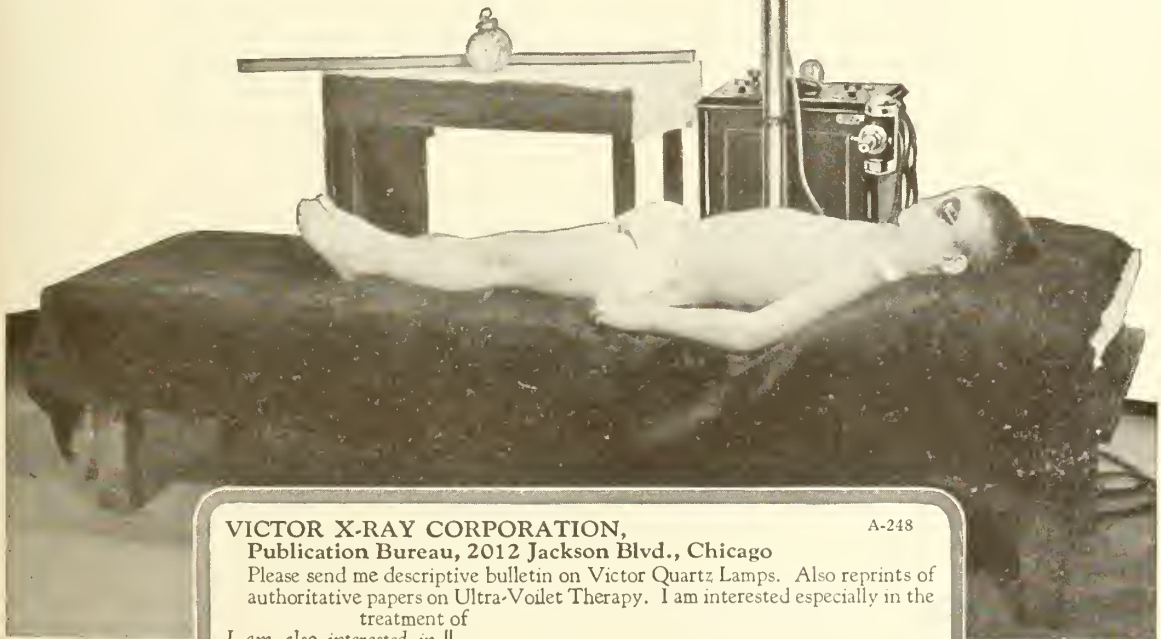
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***THE PROBLEM OF THE SUB-NORMALS IN MAINE.**

By STEPHEN E. VOSBURGH, M. D.,

Superintendent of the Maine School for Feeble-Minded

The subnormal question is a combination of sociological and medical problems. There has been a tendency during recent years for psychologists to emphasize sociological at a sacrifice to the medical. Whereas sociology treats of the origin and history of human society and social phenomena, the progress of civilization and the laws controlling human intercourse, the medical application goes much deeper and treats more particularly of the fundamental hereditary and physical factors entering into the causes. A satisfactory readjustment is gradually developing, so that a rational combining effort is resulting.

The subnormal individual, broadly classed as one below normal or average intelligence, can quite definitely be rec-

ognized by certain measure degrees of intelligence expressed by mental age or intelligence quotient (I. Q.). The normal or average intelligence is rated at 90 to 110 (15 to 16 years), dullness at 80 to 90 (14 years), borderline deficiency at 70 to 80 (13 years), and the feeble-minded group moronism 50 to 70 (7 to 12 years), imbecility at 20 to 50 (3 to 6 years), and idiocy below 20 (up to 2 years).

Idiots are defined as persons so deeply defective in mind from birth or from an early age that they are unable to guard themselves from common physical dangers.

Imbeciles are persons who are capable of guarding themselves from common physical dangers, but who are incapable

* Read before the Bar Harbor session of the Maine Medical Association, June, 1925.

of earning their own living by reason of mental defects existing from birth or from an early age.

Morons are persons who may be capable of earning a living under favorable circumstances, but are incapable, from mental defect existing from birth or from an early age, of competing on equal terms with their normal fellows, or of managing themselves and their affairs with ordinary prudence.

The intelligence level, quite easily determined, places the individual in a definite strata of society. However, more important to the community and to the person are the principles of conduct known as character traits. Every particular individual is struggling with a conflict between tendencies and judgment. There being almost as many standards of character as people, no satisfactory standard for measurement has yet been devised, and although such a measurement is perhaps possible, and attempts are being made to devise methods, there is no practical character classification at the present time. Persons are, either consciously or unconsciously, assigned to a relative social position upon crude empirical character tests.

The feeble-minded, by reason of their undeveloped judgment, often exhibit serious character traits. These deviated or perverted traits present the practical need for control. By no means do all subnormals run riot, but certain numbers do, and when unrestrained commit deeds from the simplest petty offences to the most revolting crimes.

The feeble-minded with evident character defects should therefore be the

first under control and definite policies outlined and followed. The physicians, being in direct contact with communities and individuals, have been and can continue to be of the greatest assistance in locating and putting under control this type of case.

The following policies for the limitation, care and education of the feeble-minded of the State is presented.

Enumeration: To intelligently understand the extent of the whole problem an index of subnormals is essential. A complete examination of all inhabitants being impossible, estimates of the numbers of feeble-minded in the State have been compiled from a survey made in 1918 under joint direction of the State of Maine and the National Mental Hygiene Association, records of the Maine School for Feeble-Minded, reports of the World War Draft Boards Exemptions for the State of Maine, reports of the Psychiatric Department of the Army and Navy and information gathered through our Community Service Department. The grouping of these statistics shows approximately 3% or 30 subnormals to the thousand, which on the basis of the last census means a total of 23,000.

Further, based upon the State birth rate, knowing that feeble-minded are about four times as prolific and that they seldom migrate from circumscribed areas, it is conservatively estimated that 131 children are born each year with feeble-minded parentage.

Plans are now under consideration by the State Department of Education for

a complete survey of all school children. This will give valuable information.

Prevention: Bad heredity is responsible for 80% of feeble-mindedness. In those of low mentality a mutual sex attraction, deficient ambition or ability and increased skilled competition tends to check migration with consequent tribal aggregation and perpetuation. There are a number of scattered hamlets throughout the State peopled by sub-normals in ancestral shacks. Three of the most numerous of the tribes are now in control, the most notable of which is the Malaga Island settlers.

Illegitimacy is found in 18.7% of admissions, whereas the average in the community at large is very much less.

The marriage of feeble-minded is prohibited by Statute. The law is almost impossible to administer and the element of illegitimacy greatly overshadows such control. It is evident that the workers and producers of a commonwealth are justified in adopting humane methods to decrease propagation of undesirable citizens, who, with their descendants, will ever be a burden.

The two rational methods of present control are segregation and sterilization.

Segregation requires adequate institutional accommodations and support. Not that Maine people have been remiss in caring for their dependents, but as this generation is surely passing through a crisis, every effort must be made to foster man power.

Sterilization was legalized by the past legislature, permitting vasectomy and fallocotomy. A widespread application of these operations cannot be expected,

although in selected cases it will undoubtedly be of great value.

In the remaining 20% of cases there are other factors causing arrests of development acting during intra uterine life or in infancy or early childhood. The toxic causes are more often the poison of disease such as scarlet fever, measles, meningitis, with special mention of paternal alcoholism and paternal syphilis. Traumatic causes include injury to the mother previous to the birth of the child, injury received at the time of birth or injury during the infancy of the child. Preventive medicine has and will have the greatest influence upon the control of these causes.

Institutional Development: Permanent segregation is necessary for idiots, imbeciles, defective delinquents and feeble-minded women of child-bearing age, excepting those who can safely be released after operative procedure.

I quote from the late Dr. Walter E. Fernald's article on The Growth of Provision for the Feeble-Minded in the United States:

"This lower class of idiots, many of them with untidy, disgusting and disagreeable habits, feeble physically, perhaps deformed and misshapen, often partially paralyzed or subject to epilepsy, cannot be given suitable care at home. There is no greater burden possible in a home or in a neighborhood. It has been well said that by institutional care, for every five idiots cared for we restore four productive persons to the community; for, whereas at home the care of each of these children practically requires the time and energies of

one person, in an institution the proportion of paid employees is not over one to each five inmates.

"Requiring permanent care are also the moral imbeciles and the adults of both sexes who have graduated from the school department, or are past school age, but cannot safely be trusted, either for their own good or the good of the community, where not under strict and judicious surveillance.

"The brighter classes of the feeble-minded, with their weak will power and deficient judgment, are easily influenced for evil and are prone to become vagrants, drunkards and thieves. . . . As a matter of mere economy, it is now believed that it is better and cheaper for the community to assume the permanent custody of such persons before they have carried out a long career of expensive crime.

"The tendency to lead dissolute lives is especially noticeable in the females. A feeble-minded girl is exposed as no other girl in the world is exposed. She has not sense enough to protect herself from the perils to which women are subjected. Often sunny in disposition and physically attractive, they either marry and bring forth in geometrical ratio a new generation of defectives and dependents, or become irresponsible sources of corruption and debauchery in the communities where they live. There is hardly a poorhouse in this land where there are not two or more feeble-minded women with from one to four illegitimate children each. There is every reason in morality, humanity, and public policy that these feeble-minded

women should be under permanent and watchful guardianship, especially during the child-bearing age."

A careful study of the needs for institutional development in the State of Maine has been made. Accommodations for 1,200 in a central institution, with development of extra institutional care, will adequately serve the State.

The school at Pownal, now having accommodations for 685, was founded in 1907, located in the west central part of Cumberland County, in the four towns of New Gloucester, North Yarmouth, Gray and Pownal. The total area of the plant is 1,250 acres, 1,200 acres in the original plot and 50 acres for a pumping station and for protection of the domestic water supply. The original grounds are divided into 550 woods and uncultivated, 25 acres buildings and grounds, 375 under cultivation, made up of 125 acres produce and garden truck and 250 acres of hay and pasture land.

The buildings are located in three groups, a central group, where the intensive schooling, training and administration is concentrated, and two farm groups for 60 boys each, located a mile and a half from the central group. A central heating and power plant furnishes steam for the heating, cooking and laundering in the central group, and electricity for light and power to all groups, including power for electric centrifugal water pumps. A complete water system, consisting of two pumps of 250 and 350 gallons per minute capacity, eight- and six-inch standard water mains, with convenient fire hy-

drants, now serve and protect all groups. The quality of the water supply is protected by ownership, patrol and chlorinating. The source is sufficient to abundantly supply a city of 50,000 population.

A carpenter shop, equipped with separately controlled electrically driven machines, permits repairs and construction by our carpenter and manual training departments. A blacksmithing shop is equipped with simple machines for horseshoeing, wagon repairing and general iron work.

The farm buildings include dairy barns, piggery, hennerly, horse barns, hay barns and wagon sheds.

Employees are housed in various buildings near their work, although when possible not in the same buildings.

The school at Pownal was founded for, as is expressed in the Statutes, "the care and education of the idiotic and feeble-minded." Satisfactory care includes all administrative policies, adding to it that unmeasurable quality, personal consideration; hygienic and rational living quarters, medical care with special treatments, clothing adequate, individual and non-institutional in design; food in well balanced caloric quantities, yet inviting and not too expensive; extra treats of some unusual food, such as candy or fancy cookies; entertainment with competitive sports, moving pictures and playlets; occupation especially selected for each individual; and last and perhaps the most important, a definite understanding by all employees and children of what discipline is expected and demanded.

The education, of necessity, is divided into the formal or grade, manual training and manual arts classes; and the informal or practical training in the several departments, such as cooking, sewing, housekeeping, farming, carpentering, steam fitting, electrical wiring, masonry, blacksmithing, painting and landscaping. Remarkable patience and perseverance is necessary for the satisfactory teacher of subnormals, but equally extraordinary are the results. The general aim has been to teach subjects which will be useful rather than concentrate on too much theory.

The sequence of admission is definitely stated by the Statutes. In spite of this, there is no more disquieting subject. All friends, relatives, local authorities, charitable organizations and institutions strive to have special consideration given their particular case. Briefly, cases are accepted from the application list as follows: Each county is allotted beds in ratio to their population. When a vacancy occurs a county entitled is selected. The case is then selected in order of date of application from group 1, consisting of feeble-minded in public institutions supported at public expense; next from group 2, those in public institutions not supported at public expense; next group 3, those not in institutions who have no one to provide for them; next group 4, those who have someone bound by law to provide; and last, group 5, which is at present inactive, persons of other States whose parents or kinsmen are willing to pay.

There have been admitted since or-

ganization, in 1908, 815 cases; of these 456 have been admitted since 1920, due to the new buildings, and of these 456, 200 have been accepted from State departments and institutions.

The Board of Hospital Trustees is empowered to discharge and likewise has the grave responsibility. There is no more difficult administrative duty. Realizing that it is impossible to permanently care for all the State's feeble-minded, and recognizing the pleas of parents on the one side, there is the question of protecting the individual, the community and future generations. Each request is therefore a law unto itself, and requires special investigation and consideration.

Extra Institutional Care: A good deal of segregation can be accomplished in colonies maintained by the parent institution at distances of from 20 to 50 miles. "During the past decade this form of care has rapidly grown, so that now there is general approval of the foundation of colonies for adult male feeble-minded in good physical condition. Such colonies, when connected with the parent institution, can be made self-supporting, and seem to offer a most hopeful means of providing for a greatly increased number of cases at a minimum expense to the State."

The success of institutional training and discipline is such that many patients eventually return to their homes or are boarded out and employed in the community, subject, of course, to strict supervision by officers of the parent institution.

A Community Service Department,

authorized by legislative enactment in 1919, gives ample authority for the extension of this work. A Community Service Supervisor, trained in the special work, investigates special cases, co-operating with other State institutions and departments, schools, public associations, communities and physicians. Also upon discharge or parole, cases are automatically placed in this department for follow up. Heredity and special investigations are made of cases and communities.

Education: In addition to the institutional schooling and training, education should be carried out in special ungraded classes in the public schools, depending upon tendencies of given cases, home conditions, etc. It is to be hoped that through the State Department of Education there will be an extension of this important work.

The futility of attempting to train in public schools those of an intelligence quotient of 40 or below (the middle grade imbecile) is well recognized. There are, however, many of higher grades of intelligence, without vicious character traits, who in proper home surroundings can be guided into useful citizens without institutional commitment.

Publicity: There is an amazing lack of correct information regarding the subnormal. Occasionally a well-disposed philanthropist believes certain subnormals of pleasing appearance who seem not too dull should never be sent to an institution. In general, the higher types of feeble-minded, such as the morons, are the most dangerous to the com-

mnity and posterity. In contrast, others believe all feeble-minded are bad. This is also far from the real state of affairs. Some of the most faithful, steady workers make up this class. In other words, there are good and bad feeble-minded, just as there are good and bad normals.

Few of the legal profession, with their exact stereotyped procedures, recognize the limitations and individualities of medical testimony, particularly expert testimony, excepting to confuse Court procedures. It is sincerely to be

desired, by a fuller understanding of the subject, that judges seek special advisory medical council rather than have lawyers formulate the hypothetical question.

The citizens of the State have a right to know more about their subnormal citizens and what is being done for them. It is our privilege to give that information freely.

In exact relationship are the moral, mental and financial levels of a community, State or country to the mental capacity of its citizens.

TOXICODERMA

By BOTHO F. FELDEN, M. D., Portland, Me.

Toxicoderma is the name applied to a great variety of skin manifestations produced by a large number of injurious substances, toxic in the broadest sense of the word, including mineral, vegetable and animal poisons, chemical products, medicinal agents, foreign sera, including furthermore autogenous toxins produced by different pathological processes in the organism itself, and infectious toxins originating in local and general infections. According to the pathogenetic mechanism whether the toxic substance has acted through direct contact with the skin or indirectly by ingestion or absorption we distinguish between external, or traumatic, and internal toxicodermas. The origin of a toxiderma, whether external or internal, might sometimes be easily evident

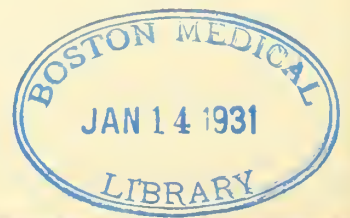
through the type, localization and distribution of the eruption; at other times this question cannot be decided, as a substance may act both locally and by absorption (example, mercurial erythema), therefore there exists no sharp line between these two groups.

If we attempt to classify toxidermas on the basis of their etiology and morphology, or, in other words, try to give a clinical description of the characteristic cutaneous changes according to the different etiological causes, it is obvious that we meet considerable difficulties, because most of these eruptions do not present well-defined classes, they are only to be understood as simple syndromes or symptom complexes, rarely produced by one specific cause, more often of a complex etiology and un-

known nature. One and the same cause may produce eruptions of entirely different appearance and course, and, on the other hand, the same form of eruption may originate from several causes, acting separately or combined. A bullous dermatitis, for instance, may have originated through the application of a blistering or caustic substance, or through the internal absorption of potassium iodide or a salicylic preparation; as another example, an urticaria might be due to the intake of certain sea foods, the prolonged use of veronal, by harboring an intestinal parasite or as a result of a chronic focal infection and to many other causes, but clinically showing the same picture. The modes of reaction of the skin against numerous harmful substances is limited. Thereto must be added as a factor of importance the so-called predisposition, that is, the increased sensibility of an individual to respond with unusual reaction to a minimum noxe or the production of injurious effects by certain substances to which normal individuals are immune in any dose. Predisposition might be congenital or acquired, permanent or temporary, and may occur a number of times. If general, the skin proves susceptible to all irritants. If special, intolerance exists only towards a single substance or a group of substances

Directing our attention to the observance of the *clinical symptoms* of toxidermas, we find that only the minority of them have distinct characteristics, allowing to presume a certain diagnosis as to its specific cause. Of these I mention as the most common the erythemata

in patches after quinine and chloral, the roseolar erythemas after copaiva and other balsams, the purpuras due to phosphor or iodide intoxication, the almost pathognomonic oval-sized, dusky red patches after antipyrin, the bromide and iodide aenes, as well as the fungoid tuberos iodo and bromodermas, and finally the arsenical keratoses and pigmentation. But the *majority* of toxic eruptions are *imperfectly* characterized, seldom pure and simple, which means consisting of lesions of the same kind and same degree of development, but more frequent complex and polymorphous, consisting of lesions in different stages of evolution, and of lesions of various types, and their intermediary forms. We find all gradual transitions from a slight temporary redness of the skin to a pronounced margined or figured erythema, if more extensive and diffuse from a roseola to a generalized erythroderma, from edematous erythema to urticaria, if hemorrhagic to purpura, and if topped by a blister to a vesicular or bullous dermatitis. All variations are met with occasionally in combination, which might puzzle the physician and cause considerable difficulties in analyzing his case. Example: I remember a case about a year ago, in Minneapolis, where I was called in consultation by an internal clinician to see a fifty-year-old lady. She had been treated for some time for muscular rheumatism with atophan and developed an almost generalized erythema, very itchy, partly showing typical urticarial lesions. In the face, back of hands, and feet, the inflammatory reaction was so



pronounced that there were plain vesicles, which were partly ruptured and offered the clinical picture of an acute, oozing eczema. The treating physician thought to deal with a new and to him unknown condition on account of the various types of the appearances, but this case proved to be a generalized toxicoderma of a very severe nature, due to the cumulative effect of the atophan (chemically phenyleinchoninic-acid). The patient recovered after several weeks of severe illness and repeated entire desquamation of the epidermis.

The various cutaneous changes of the toxicodermas, most of which have an inflammatory tendency and present in a broader sense different types of dermatitis, are made more clear by the study of the pathological anatomy. I will give a short survey of the histological alterations, but will precede this for the benefit of quicker understanding, *reviewing* the normal skin histology.

The outside stratum corneum, consisting of keratin, has closely fitted cells without a nucleus. The enlargement of this layer we call keratosis. The next layer—the stratum granulosum—consists of granulated spindle cells, containing keratohyalin. The keratohyalin plays an important part in the cornification process. It is assumed to be a chemical prestate of keratin. Where we find excessive processes of keratinisation, we also have an increase of the keratohyalin, which is called granulosis. On the other hand, in cases of pathological cornification the parakeratosis, that is, the forming of nucleus containing

horn-cells, the keratohyalin is lacking. Upon the stratum granulosum follows the rete Malpighii, or stratum mucosum or denticulatum, so-called, because there exist fine thread-like filaments between the cells, by which canals are formed beneficial to an unhindered circulation of the nutritive lymph. An extension of this stratum is designated as akantosis. The basal or germinative stratum of the rete Malpighii consists of cylindrical cells. The rete Malpighii joins the epidermis to the corium in dactyli-form projections, the so-called rete pegs. The corium represents the connective tissue part of the skin, consisting of muscle bundles, connective tissue and elastic fibres, and containing blood vessels, nerves and their endings, sweat glands, hair follicles and sebaceous glands. Against the epidermis, the corium is bordered in a waved line by the papillæ, which are stored between the rete pegs. The following fatty layer (tela subcutanea) is of lesser interest for our theme of to-day. Now what takes place during the various processes clinically presenting the toxicodermas? The most simple reaction is the dilation of the blood vessels, which clinically presents itself as an erythema. If to this erythematous hyperemia a serous exudation is added, an exudate in the papillary body, we are confronted with the phenomenon of the urtica or hive formation. Exact examinations have proven that even during this uncomplicated wheel formation a collection of polynuclear leucocytes takes place within and close around the blood vessels. That is, the wheel formation

does not carry a purely angioneurotic character, but represents the simplest form of cutaneous inflammation. When an increased infiltration of cell elements has occurred, we meet nodule-like elevations or papules. If the red blood cells are more numerous in the diapedetic process, we are met by hemorrhagic patches or purpura efflorescences, which do not fade under finger pressure. When the edema reaches a further development, it advances through the rete Malpighii and finally through the entire epidermis. The filaments of the Malpighian cells are torn apart, the fluid collects into vesicals, the roof of which is formed by a thin layer of horn cells, which are filled with transparent, fibrinous fluid and a few cell elements. These vesicles, which are very small at the beginning, increase in size, confluating with neighboring vesicles until they are visible with the naked eye and protrude under the horny layer. The oldest vesicles are pushed up toward the surface by the outer growth of the epidermis, and new ones are often formed beneath them. If the vesicles dessicate without oozing or suppuration, it gives rise to tiny or larger crusts, composed in variable proportions of dried serum and remains of parakeratotic cells. When the vesicles have ruptured spontaneously or under the influence of scratching or rubbing, we have a condition which corresponds to the oozing eczema. If an infection takes place through pyogenic microbes, the state of suppuration, and after drying of the pus to thick honey-colored crusts of impetigination, is reached. Coincidentally with the spon-

giosis, the edema of the rete Malpighii gives rise to the change of keratinisation, which I before explained as parakeratosis, that is, the partial disappearance of the stratum granulosum with the preservation of the nuclei in the cells of the horny layer. The parakeratosis is the predominating alteration in all scaling kinds of dermatitis. So we see that the qualifying terms, erythematous, urticarial, hemorrhagic, papulous, vesicular, oozing, impetigenous and scaling, which one adds to the name of dermatitis, do not designate any distinct types, but only various forms of development or more or less persistent phases of the same process.

Returning to the question of etiology of toxidermas we distinguish, as mentioned before, external and internal causes, the latter subdividing, although being schematic, into the alimentary, the medicinal or toxic in the narrower sense of the word, the autotoxic and infectious. Concisely I shall mention of the external injuries among the chemicals first the usual antiseptics, such as carbolic acid, formalin, iodoform and other iodide derivatives, mercury and its salts, chrysarobin and the various tars, then we must give attention in our practice to the dyes of the hair and beard, which usually have for their constituents paraphenyldiamin, silver nitrate, subacetate of lead, pyrogalic acid and hydrogen peroxide. Often there arises only after a period of complete tolerance, extending over months and even years, an edematous highly pruritic erythema on the upper eyelids, spreading over the entire face, some-

times neck, shoulders and hands. If the reaction is severe, the erythema becomes covered with vesicles, which later rupture and cause exudation and crusts. The local anesthetics cycloform and butyn are capable of producing similar effects. Also the occupational dermatitides of machinists, masons, cabinetmakers, painters, washerwomen, sugar refiners, cooks, gardeners, must be mentioned here. Furthermore, the dermatitis venenata produced by the contact with certain plants as rhus toxicodendron (poison ivy), primrose, clematis, chrysanthemum and the hair of different animals, dogs, cats, caterpillars, and the stings of insects.

Of the internal causes, some of which I referred to before, which may produce toxidermas, I mention among the alimentary the generally known, such as spoiled fish and meat, game, spoiled or diseased muscles, sea fish, crabs, mushrooms, strawberries, raspberries, poisonous alcohols. The pellagra, which is supposed to be due to fermented maize, has to be classed in this group, too, as a chronic form of alimentary toxicoderma, if one neglects the infectious theory of its origin. To the toxic causes in a narrower sense, count the medicaments delivered per os or by injection, as well as the therapeutic sera and vaccines, which may act as toxalbumine (example, scarlet vaccine). Among the medicaments, mentioned above in part, are quinine, morphia, belladonna, chloral hydrate, sulphonal, veronal, luminal, balsams, bromides, iodides, salicylic acid and its preparations, mercury and arsenic derivatives, especially

the salvarsan, which is the most important. I have had occasion to observe a number of serious universal erythrodermas in the course of combined mercury and salvarsan treatment at the Charité Clinic in Berlin, whereby it was not possible in some cases to accurately decide whether the erythroderma was due to the mercury or salvarsan, since both may cause the same manifestations. It came to generalized redness of the skin with vesicle and scale formation, chills, albuminuria and, just as in a case of primary erythroderma of the so-called Wilson-Brocq's disease, to eosinophilia, diarrhoeas, participation of the mucous membranes of the mouth and throat in the process of inflammation, and repeatedly to exitus. In cases that end favorably, confinement to the bed of long weeks, sometimes with total loss of hair and nails, preceded the restitution.

Every salvarsan therapist should keep the severe danger of this medication continuously in mind, and most carefully pay attention to the seemingly unimportant danger signals, as well-defined inflamed patches, transitory swellings, superficial eczemas, which mostly precede the severe universal salvarsan erythrodermas, and immediately at the entrance of such symptoms modify or interrupt the treatment temporarily.

Of the auto-intoxications likely to produce toxicodermas, I mention the gastro-intestinal disturbances, often producing urticarial eruptions, insufficiency in the anti-toxic function of the liver, and the excretory action of the kidneys, diabetes, disorders of the hematopoietic organs, functional disturbances of the

glands of internal secretions, the cachectic stages of advanced cancer.

To the infectious group of toxicodermas, I count the skin eruptions in the course of acute gonorrhœa, diphtheria, miliary tuberculosis, puerperal and other septicemias, the roseola of syphilis, typhoid and cholera and the rash preceding smallpox. (Example: About two years ago, during the beginning of the last smallpox epidemic in Minnesota, I recall a case of an orderly in the general hospital in Minneapolis, who took sick with a widespread roseola, clinically identical to a syphilitic one; but as no primary sore could be discovered and the general adenopathy was missing, the diagnosis of toxicoderma was made; the next day the man presented a typical smallpox eruption.)

Ending, I complete the foregoing statements and recapitulate as follows: Aside from the simple erythematas, the pure urticarias with nothing but wheel formations, the primary purpura cases, as the *peliosis rheumatica* and the *morbus maculosus Werlhofii*, we find in a large group of diseases, which we summarize according to their pathogenesis under the name of toxicodermas, skin manifestations which show all combinations and transitions from urticaria, purpura, to the erythema, to the vesiculous, oozing, scaling, eezematoid dermatitis, to the universal so-called gen-

eralized erythroderma. The various lesions in this conception are no individual types, but only phases of development or stages of various intensity of the same pathological process. The universal erythrodermas show often, as an expression of injury to the entire organism or as a result of the noxa which has caused it, fever, general prostration, disturbances of the central nervous system, and the gastro-intestinal tract. eosinophilia of a high degree, albuminuria and decreased nitrogen excretion. The prognosis is in all cases of generalized erythroderma to be made with the utmost reserve, since recurrences and unfavorable exits happen. If it is impossible to discover the specific cause of a toxicoderma, we are forced to a general and local symptomatic treatment in accordance with the momentary condition of the skin. In parenthesis I add that the intravenous injection of calcium preparations or of sodium thiosulphate solution sometimes produces good influence in such cases.

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REGARDING PERIODIC HEALTH EXAMINATION

By HAROLD JAMESON, M. D., Rockland, Me.

It is desirable that a system of periodic health examination shall be organized. The medical fraternity appreciates the significant value derivative to society from such a practice. Many physicians, however, fail to grasp the opportunity afforded when the patient proffers himself for a general physical examination if unable to point to this, that or the other organ as the offender. Seemingly unimportant disturbances do not stimulate the interest which the obvious lesson incites, that is, not in the doctor's mind. Sir William Osler stressed the opportunity and privilege falling to the lot of the general practitioner who sees disease in its incipency. Before periodic health examination can get a footing, the practicing physician must appreciate his opportune position.

Certain types, like the chronic invalid, the neurotic female or the introspective worrying male patient parade before the physician with sufficient frequency. Yet in these cases the patient receives rarely an interested survey from a comprehensive point of view. The case of the usually healthy individual who never has occasion to consult the physician is more precarious. After middle age this type of individual becomes heir to a heritage of pathology which is destined to progress in direct ratio to the completeness of his isolation from good medical opinion. It is for this latter group that periodic health examination would seem paradoxically of greatest value.

A recent case bears a moral and prompts the writer to submit these notes. The healthy farmer of 55 had employed no physician for himself within his memory, nor did he when he first noted the passage of bloody urine. However, the severe colicky pain in the flank a few hours later demanded medical aid and warranted the use of morphia. When the bleeding subsided, after eighteen or twenty hours, the healthy individual, now properly the patient, deemed himself as well as ever and conducted himself accordingly. After another month there was recurrence of the same events, and the patient accepted the advice given before to submit to a careful investigation.

This patient was found to be indeed a healthy appearing man, except for evidence in his countenance of recent acute physical pain. However, palpation of the abdomen discovered in the right flank a firm, oval, slightly tender tumor, the shape of a small football. Its upper pole could be traced to the costal margin, beneath which it disappeared, while the lower pole extended into the right lower quadrant, terminating at the level of McBurney's point. Palpation of the tumor bimanually, and its general location and shape suggested its renal origin. Further investigation by cystoscopy and pyelography supplied additional evidence that the condition was a renal tumor and established the adequate functional value of the left kidney.

At operation the kidney was found to

be three times its normal size, with moderate adhesion of the fatty capsule at the lower pole. Nephrectomy was performed, with removal of the perirenal fat.

Section of the organ along Brödel's line exposed the pathology, a typical picture of hypernephroma. With the exception of an area at the upper pole the size of a silver dollar, the parenchyma was entirely replaced by the characteristic yellowish tissue of tumor cells. The vascular pedicle was fortunately not invaded. The true capsule of the kidney was intact, though at the lower pole this was firmly adherent to the fatty capsule.

This patient has made a smooth recovery from operation and returned to his home in excellent condition. He should have, for he was healthy! What of his future? No metastases were discovered after careful search, yet the tumor was malignant.

The questions arise, how long had the renal tumor been palpable, and would urine analysis have discovered microscopic blood or traces of albumen prior to the initial gross hematuria? The second question is impossible to answer

dogmatically, yet with the amount of destruction of renal tissue one might fairly expect some evidence, at least a slight trace of albumen. Hemorrhage probably did not occur in advance of invasion of renal pelvis by new growth. The first question permits of ready conjecture. Allowing for sudden acceleration to growth, the tumor could scarcely have acquired such size within six months or more likely a year, without giving warning to the patient in one way or another. There was no true distention of the kidney pelvis as with hydronephrosis, although there was distortion. There could have been no intermittency of size as commonly occurs from an obstructive hydronephrosis. In short, a renal tumor could probably have been palpated by trained touch six months, if not twelve months ago.

On general principles, surgical interference in a case of this type six months or a year ago would have multiplied this patient's chances of longevity tenfold.

Preventive health methods and remedial medical or surgical methods will have gained a powerful ally when periodic health examination becomes established and society will profit thereby.

JOURNAL OF THE MAINE MEDICAL ASSOCIATION

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EDITORIAL COMMENT

Physician's Duty

When a patient consults a physician for some disability, the physician must assume that the patient is seeking relief from some manifest or imaginary sickness, and his duty lies in a complete examination, careful diagnosis and subsequent treatment based on his findings. He should also ease the mind of the patient and relatives, but above all to be absolutely honest with his patient.

The writer has in mind a type of physician common to past years, but rapidly disappearing, viz., the one who always wants to know the physician who treated the patient before and then tries to show the patient where the other physician was all wrong. He would go into the sick room, gather all the medicine, and request that they be turned down the sink, while he, in turn, mixes up a new collection of concoctions. In the early days of practice of medicine this was somewhat justified, on account of lack of medical knowledge, but with our present knowledge there is little excuse for this practice. This type of physician has done irreparable injury to his profession, in that

he has created a doubt in the lay mind of his brother physician's training and ability to follow his profession, and if a graduate of the regular school of medicine is not a safe man to consult, why should they not turn to the cults, who claim a training equal to any and can cure any ill or ailment. The gradually increased requirements for entrance to and graduation from the medical schools of the United States during the past ten to fifteen years serves as an ample safeguard to the lay public that the graduates of our medical schools are the most highly trained men who practice the healing art. We, as physicians, should be proud that this is so, and should devote all our energies towards improving our own knowledge and aiding our fellow practitioners to follow theirs. This is never accomplished by unfair criticism or knocking. No human mortal is infallible, and our patients whom we fail to relieve are always seen by someone else. The second physician in a given case has no knowledge of conditions existing while the first physician treated the case, and why not be honest and say so. It is

easy to criticize, but hard to estimate the damage done to the patient or the other physician by unfair criticism of this kind. Is it not better judgment to ignore all that has passed before. Carefully examine your patient and treat him as your best judgment dictates. If

the question of previous treatment comes up, merely say truthfully that you do not know the conditions under which your brother physician was compelled to work. Your plain duty is to be fair to the patient, yourself and your brother practitioner.

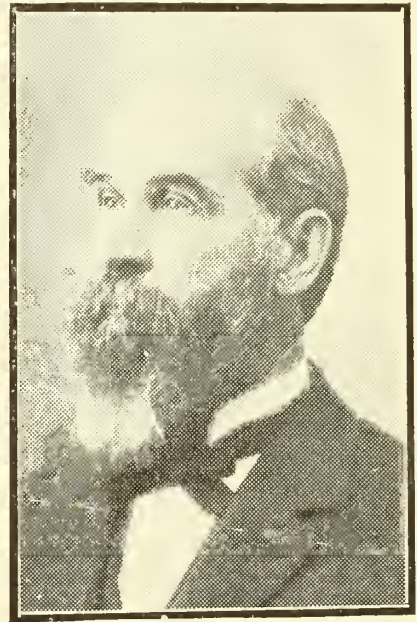
NECROLOGY

Caleb Joseph Emery, Biddeford, 1846-1925

Sometime about the year 1840, Chandler Emery, of Eliot, in York County, suffered from asthma, and at the advice of his physician emigrated to Mandarin, Florida. He soon met there Miss Elizabeth Saunders, married her and raised a family of four children, a daughter and three sons, one of whom was Caleb Joseph, born April 16, 1846, and who died Saturday, November 7, 1925, in Biddeford, after more than fifty-four years of practice in that city.

Caleb Joseph Emery was educated in the schools near by his birthplace. His father owned a small plantation and slaves, and on the breaking out of the war of the rebellion, in 1861, the boy was drafted into the Southern army. He failed to respond, and followed back into Maine his father, who had started off in the previous year. Arriving at Eliot, young Emery enlisted at the Navy Yard, near by, and was soon appointed a hospital steward, serving four years on the U. S. S. "Yantic," and elsewhere, until the end of the war. He then studied medicine with Dr. Parsons, of

Ayer Junction, Mass., attended lectures at the Harvard Medical School (alongside of the writer of this biographical sketch), and completed his studies with



DR. CALEB JOSEPH EMERY

a medical degree at Bowdoin in 1871. Dr. Warren, a well-known physician and surgeon of Biddeford, beginning then to feel the burdens of age sent an urgent

invitation to young Dr. Emery to come to Biddeford and take up the reins of his practice before they fell from his hands. This attractive offer Dr. Emery accepted at once, and in July of 1871, he settled in Biddeford for life. With the exception of a few months toward the close of his long life, he practiced in that city more than fifty-four years.

Soon after settling for practice, Dr. Emery married Miss Llewellyn Daggett Bassiek, from near Belfast, and is now survived by her and two daughters, one of whom is a practicing dentist in Biddeford.

Dr. Emery served several years as city physician. He was a faithful attendant on the meetings of the State and County Medical Societies, did much to establish and carry on the work of the Webber Hospital, served long on the school committee, took personal interest in education of the children, and after soon obtaining a solid reputation for the oversight of the comfort, welfare and care, of his numerous patients, that reputation he held to the end of his career, which occurred rather suddenly on the evening of Saturday, November 7, 1925.

As he accumulated money, he became a director in banks, and was regarded as a man of honor, skill and probity. He was admired and beloved by many. Few physicians practice more than fifty years in any one place and maintain always a high reputation in all respects. From that point of view the life history of Dr. Caleb Joseph Emery, of Biddeford, will long remain on the records of the Maine Medical Association, and those of his

place of his practice; as a citizen rarely equalled, and for high personal respect and civic esteem never surpassed.

Henry McCollister Moulton, Cumberland Center, 1863-1925

Dr. Moulton, a man of great common sense, stood much in the line light of publicity all of his life, and yet he was a plain country doctor. As such he was devoted to the practice of medicine as his high aim in life. After that he loved the big game of political adventure, and the attractive pursuit of agriculture, in which he became famous for his bredred flocks.

Born in Canton, December 2, 1863, the son of Charles Thompson and Jane McCobb McCollister Moulton, he died in Cumberland Center rather suddenly at the last, November 22, 1925, at the early age of sixty-two. He was really too young to cease to labor for the good of the community, but he had for some months suffered from nephritis, and recognized that his work was soon to end.

After his education at Westbrook Seminary, and then at Bowdoin, where he was graduated academically in 1886, he obtained his medical degree at the Dartmouth Medical School in 1889. During his college life, in both of these institutions, he was much given to sport, and in baseball, as a fine catcher, he went by the affectionate name of "Mull," or "Muldoon," amongst college men for the rest of his life.

He settled at once in Cumberland Center for life, as it turned out to be,

and soon built up a reliable reputation as a country doctor of uncommon skill and of great common sense in minor illnesses as well as in the emergencies of graver maladies. As he prospered he built fine household and farm buildings, went into the raising of neat stock, as it once was called, and horses, of which he became inordinately fond. In all branches of agriculture he was a success. He went into politics because it was sport to him, as baseball had been, and born a Democrat, living a Democrat, and dying also a Democrat, he served the State very honorably in the Legislature as Representative and Senator. Living amidst a Republican majority big enough to stagger others, Dr. Moulton came ultimately very near being elected Sheriff of the County. When

in the Legislature he spoke well and to the point, said what was on his mind and sat down again without vague expressions of ideas or generalities. He favored the farmers, and did his best to improve their conditions and lower their taxes.

Altogether, the career of Dr. Moulton was very honest, very much based on common sense, and he lived a truthful, earnest life as a physician. He surely will be missed for a long time to come. His career as a physician stands forth well worthy of following as a good example to all who knew him.

Dr. Moulton married Miss Ina Wilson, of Falmouth, some years ago, and is survived by her and by three capable, well-educated daughters.

COUNTY NEWS AND NOTES

Androscoggin County Medical Society.

The regular monthly meeting of the Androscoggin County Medical Society was held at the Dewitt Hotel, Lewiston, Me., Feb. 23, 1926.

The meeting was called to order by Dr. W. W. Bolster, President.

Records of previous meeting not read.

Plans were discussed for the State Conference of Medical Association, which is to be held June 10-12, 1926. This Maine Medical meeting will be at Poland Springs, with a large number of prominent speakers from both within the State and outside of Maine. A special assessment for same is being taken.

There were present: Dr. W. W. Bolster, A. W. Plummer, B. G. W. Cushman, W. S. Garelon, R. A. Goodwin, D. A. Barrell, E. Leathers, John Sturgis, H. R. Miller, George Desaulniers, S. L. Andrews, W. E. Webber, H. A. Garelon, Wm. J. Fahey, H. R. Miller, B. W. Russell, E. V. Call.

E. V. CALL, M. D.,
Secretary pro tem.

Sisters' Hospital, Waterville, Me.

The following program was presented at the February Clinical Meeting held at the Sisters' Hospital at Waterville, Feb. 9th.

"Focal Infection," Dr. J. O. Piper.

Report of a Case of Miliary Tuberculosis in Infant, diagnosed by X-ray Findings, Dr. J. P. Goodrich.

Observations on Diagnosis of Endocrine Dysfunction, Dr. F. T. Hill.

The March Clinical Meeting, to be held on March 9th, will be devoted to a symposium on "The Diagnosis of Endocrine Disorders." The profession is cordially invited.

The Sunday afternoon "Health Talks," which have been held at the Sisters' Hospital Sunday afternoon, beginning in January, have proven to be very successful. There has been a large audience each afternoon, and the interest in these meetings on the part of the public has been easily manifest. A different topic has been taken up each day, and after the talk there has been a general discussion entered into by the audience. These meetings will be continued during March and April. The subjects thus far taken up are as follows:

"The Hopeful Aspect of the Cancer Problem," Dr. E. H. Risley.

"Origin and Development of the X-ray," Dr. J. P. Goodrich.

"Preservation of Vision," Dr. H. F. Hill.

"Constipation," Dr. J. O. Piper.

"Anesthesia," Dr. P. S. Merrill.

"Prenatal Care" (meeting under the auspices of the Mothercraft Department of the Woman's Club), Dr. R. L. Reynolds.

"First Aid in Injuries," Dr. E. W. Boyer.

"The Problem of Tuberculosis," Dr. John Shaw.

"The Prevention of Infection," Dr. N. Bisson.

Penobscot County Medical Society.

The Penobscot County Medical Society held its regular meeting at the Bangor House, Tuesday evening, February 16, 1926.

The following were voted to membership: C. B. Popplestone, M. D., State Hospital, Bangor, Me.; Max E. Witte, Jr., M. D., State Hospital, Bangor, Me.

Dr. Maxwell McDonald, Harvard Medical School, gave an interesting paper on "The Central Nervous System in General Medicine."

Business session at 7.30; dinner at 8.00.

The following were present: Luther S. Mason, M. D., Dr. Maxwell McDonald, Harvard Medical School, E. S. Merrill, H. D. McNeil, G. M. Woodcock, D. A. Robinson, W. E. Fellow, Daniel McCann, C. S. Philbrick, F. B. Ames, F. D. Weymouth, Brewer, Me., H. W. Sampson, M. A. Webber, Pittsfield, Me., Norman Cook, Newport, Me., A. E. Small, A. W. Fellows, J. L. Johnson, L. H. Ford, E. E. Brown; G. H. Stone, H. C. Knowlton, Hampden, Me., C. J. Hedin, J. B. Thompson, M. C. Madden, Old Town, Me., H. W. Johnson, J. A. Lethiecq, Brewer, Me., E. W. Russell, J. F. Starrett, J. B. Woods, B. L. Bryant, A. K. P. Smith, L. H. Blanchard, Pittsfield, Me., M. C. Madden, Old Town, Me., J. R. Varney, Old Town, Me., H. E. Thompson, E. L. Herlihy, J. P. Russell, A. H. Schriver, C. M. Thomas, Brewer, Me., C. J. Taylor, H. J. Milliken, L. F. Wright, S. N. Marsh, West Enfield, Me., C. H. Burgess, C. B. Popplestone, M. E. Witte, Jr., J. F. Cox.

BOOK REVIEWS

Textbook of Physiology. W. D. Zoethout, M. D. Second Edition, C. V. Mosby & Co., Publishers, St. Louis. Price, \$4.50.

This book is planned to fill in the gap between the rather too concise treatises in physiology and the very large ones, of which there are many in the field. The idea and reason for the writing of such a book as this is that with the limited amount of a hundred hours allotted each year in the medical schools of to-day for the study of this important medical topic, the larger treatises are too voluminous and wearisome to the mind. Instead of either of these varieties of treatises, we have before us a book of some five hundred pages, including many excellent illustrations, and such a book offers to students and to busy practitioners a chance to follow out, without too great an effort, the latest ideas in physiology. The contents of the work are usefully arranged and displayed, and the illustrations, so far as we can judge, are excellent and explanatory. The language employed, difficult to those unused to the modern trend of the uses of words, is made plain by careful writing. Such a mode of thought is needed by students of the day to obtain some competent and satisfactory understanding of the physiology of to-day. Now that laboratory methods are so much in vogue in the diagnosis of all diseases, such textbooks as this are of the greatest value. So, too, physicians puzzled with the terminology as seen in so many medical papers will find in such a book, with the aid of its careful index, a perfect explanation of many difficult terms. Finally, the student will in this treatise find abundant material for self-instruction, ability to understand the terms banded to and fro profusely in lectures, and finally the ability to answer

the questions put to him in his final examinations for his medical degree. The fact of the publication of a second edition of this textbook emphasizes its value to the student and to the profession.

J. A. S.

Therapy of Puerperal Fever. Koehler and Ehrenfest. C. V. Mosby & Co., Publishers, St. Louis. Price, \$4.00.

Starting out with the assertion that no complete textbook on this topic has been presented to English-speaking physicians for more than fifteen years, Ehrenfest has translated and edited Koehler's monograph on the therapy of puerperal fever. Considering the large mortality still prevalent throughout the world from this disease, the editor considered it very advisable to bring out a new arrangement of Koehler's classical monograph.

This book, of almost three hundred pages, is divided into two sections, prophylaxis and therapy. Under prophylaxis we note all the means recommended and employed to prevent infection, and the use and value of preventive vaccines and sera of many varieties. Believing that prevention cannot accomplish much, the next section goes into therapeutical means, including local, surgical and chemotherapeutical in infinite variety.

Since much more space is given to chemotherapy than to local or surgical treatment, we are inclined to the belief that in chemotherapy more reliance is to be placed than in all other suggestions hitherto offered to the profession. But all means are alluded to widely, and the reader can take his choice in opposing this terrible fever.

Concluded on page XII



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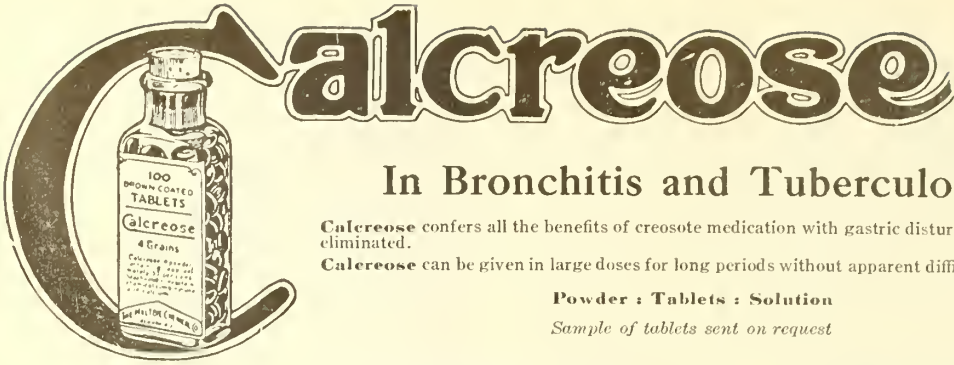
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Continued from Page 62

The illustrations are mostly of temperature charts, a complete bibliography for students wishing to consult original works is offered, and a complete index ends the valuable work.

Such a book as this is invaluable to the practitioner and student, and so I will gladly turn to its pages for assistance and advice in the great variety of

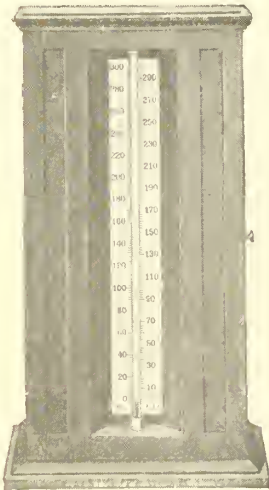
phases which this fever exhibits in the puerperal state.

As a translation or adaptation it is remarkably well done and reads as smoothly as if the writer were born to our language. It is a book of distinct value to the specialist in obstetrics, and to general physicians, also, looking about for help in emergencies.

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American Board of Otolaryngology

The American Board of Otolaryngology has arranged for two examinations during the month of April as follows:

St. Paul's Sanitarium, Dallas, Texas,
Monday, April 19th, at 9.00 A. M.

Stanford University Medical School,
Clay and Webster Streets, San Francisco, California, Tuesday, April 27th,
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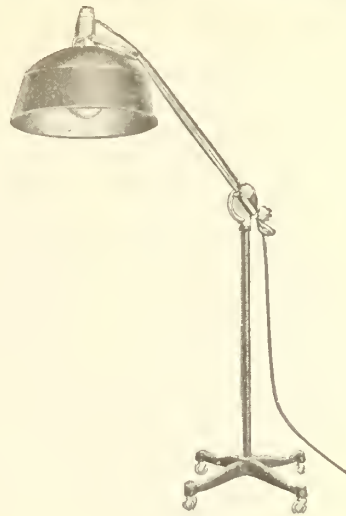
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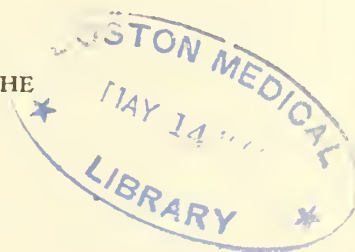
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THE JOURNAL

OF



THE



Maine Medical Association

The Official Organ of the State and County Medical Societies

VOL. XVII, No. 4

APRIL, 1926

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IV

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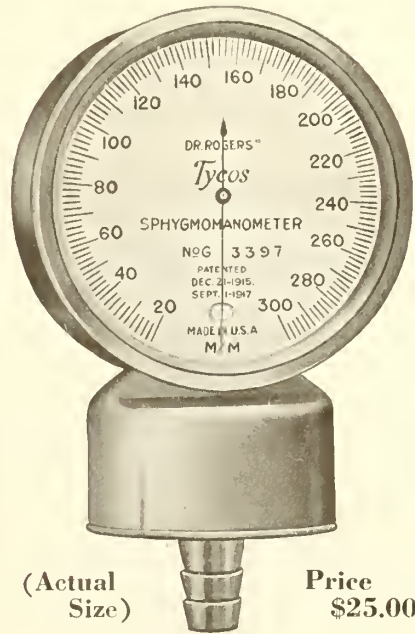
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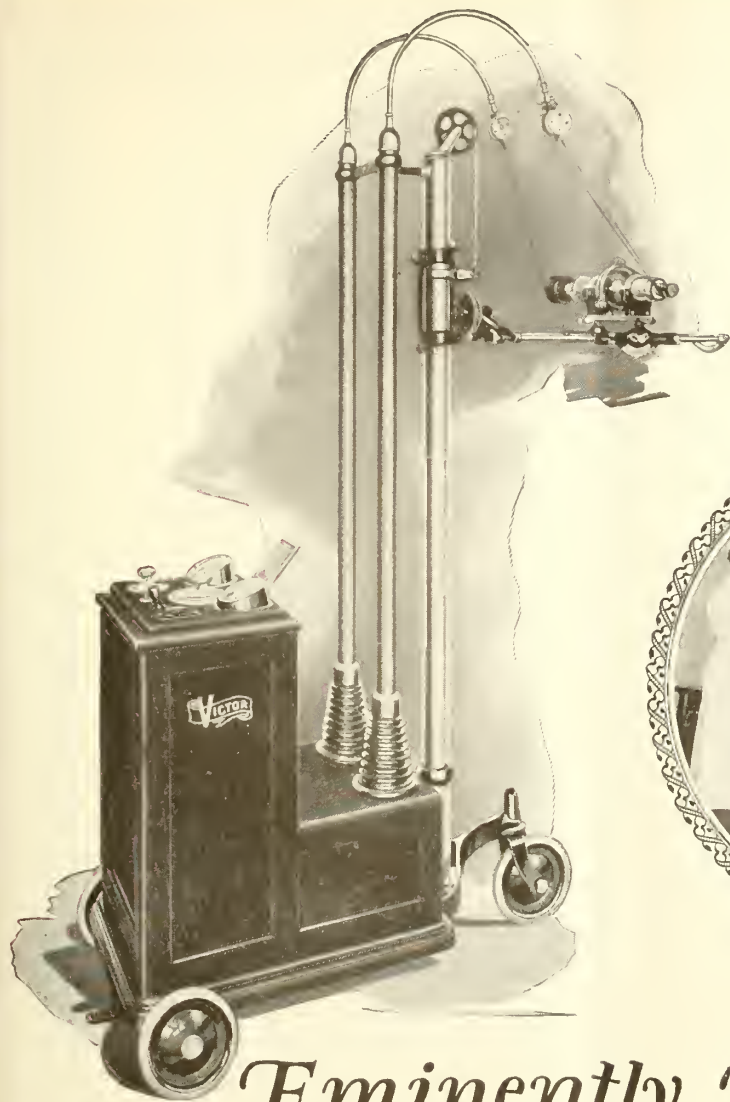
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THE JOURNAL

OF THE

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Published under direction of the Council of the Maine Medical Association

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The Journal assumes no responsibility for opinions expressed by the authors.

VOL. XVII.

APRIL, 1926

No. 4

*MAINE'S TEAM-WORK FOR HEALTH

By WALTER D. THURBER,

Executive Secretary, Maine Public Health Association

Maine is succeeding in its campaign against preventable disease and in its efforts for better public health. It has been said that we, in Maine, are making more rapid progress in this endeavor than any other state. Certainly the vital statistics issued by the federal government, and which is the accepted yardstick for measuring public health, prove that our advance is consistent, that it covers many lines of activity, and a comparison with other states gives Maine cause for justifiable pride.

The United States Public Health Service reports that the death rate from typhoid fever is "consistently lower in Maine than for the registration area." The same authority states that for diphtheria, tuberculosis, scarlet fever and measles the death rate in Maine—cov-

ering a sufficient period of years to make the statistics valuable for purposes of comparison—is notably lower than for the registration area. Our pneumonia, influenza and cancer rate is slightly higher than the average for the registration area. In the matter of tuberculosis we find Maine has the lowest death rate of any state east of the Mississippi River and south of the Great Lakes. In 1922, we passed our New England neighbors, New Hampshire and Vermont, and for the two succeeding years we have more than held our own.

A study of the vital statistics issued by the U. S. Government, made for the Maine Public Health Association by the statistician of the National Tuberculosis Association for the year 1920,

*Read before the Bar Harbor session of the Maine Medical Association.

placed the average age at death in Maine at 49 years, while the average age at death for the nation as a whole was 42.1 years. The advantage in Maine's favor was 6.9 years. A similar study for the year 1923—the latest year for which such figures are now available—places the average age at death in Maine at 52.5 years as compared with an average age of 44.9 years for the registration area. The advantage in Maine's favor is 7.6 years. In that three-year period we gained seven-tenths of a year per average life on the balance of the country.

In fighting our infant mortality—admittedly high—Maine made steady progress in the year 1923–1924 and was exceeded by only seven states in the reduction accomplished.

Before proceeding with a discussion of the methods of team-work, which must be given a large part of the credit for Maine's comparative standing, let us take just a moment to make a partial analysis of what these figures mean to Maine. For example, let us use tuberculosis. If the death rate in Maine from this disease in 1919 had maintained for the year 1923, our state would have lost 179 additional lives for that single year. This saving must be credited to the measures which Maine has taken to bring tuberculosis under control, together with the broad campaign of education on health promotion.

Prof. Irving Fisher, the noted sociologist, has placed the value of a life lost or saved through tuberculosis at \$5,000. Thus, on this basis, in a single year

from a single disease Maine saved \$895,000, or more than double the entire amount expended during the year for the entire campaign for better health in this state, including state and local appropriations and contributions for volunteer health work.

Another example might include our reduction in infant mortality for the two-year period, 1923–1924. In that one year, had the 1923 baby death rate been continued for 1924, Maine would have lost 143 more baby lives than it did lose. That these lives were saved for Maine must be credited to the Maine plan of team-work for better health. If we should again apply the cold method of monetary calculation, we see that in this single respect the saving to Maine in a single year is \$715,000. Does work for better health bring rich dividends? There is only one answer.

But let us place aside all "cash" consideration and regard the great saving in human misery, the hundreds of homes and firesides which would have been invaded by the grim angel of death, but which, because of Maine's team-work for health, have had the blow delayed for many years of added joy and helpfulness together for these numerous family circles. Can anyone measure the value of a work which brings such results? No one yet has found a unit of measure for the health and happiness of a fellow human being.

In any work for improved public health, the first, and by far the most important, consideration is the scientific and professional leadership of the

medical profession. The proper and successful administration of any health department is based entirely upon the proven findings of scientific medicine—the prevention and control of epidemics, the rules of quarantine, the safety of water and food supplies, the conduct of diagnostic laboratories. All these, and other public service activities coming within the jurisdiction of boards and departments entrusted with governmental authority in protecting public health, have had their origin in the ranks of the medical profession.

All that has been said, and more, applies to the activities of a volunteer organization engaged in public health work. The mission of the volunteer public health association is threefold:

1. To interpret for the so-called average or lay mind the findings of scientific medicine in the field of public health. To bring the general public to a better realization of the importance and the value of health, to teach health conservation and to promote such movements as the campaign for periodic health examinations.

2. To develop public support for our constituted health authorities, to conduct campaigns of education for the creation of adequately financed health departments and to serve, in a measure, as a connecting link between the official health agency and the general public.

3. To conduct demonstrations in public health work, such as the establishment and maintenance of public health nursing service, clinics, health centers, school nursing, lecture service, etc., pending such time as the public

by suitable taxation will provide funds for this important work.

One of the functions of a volunteer association engaged in public health work is to bring together for a common purpose those agencies in the community or the state which consider health of paramount importance. This leads us to the subject of this paper, "Maine's Team-Work for Health."

First in the list, as we name the members of the team, comes the Maine Medical Association. We place it first because it represents for Maine the organized science of medicine which has furnished and which continues to furnish the basis, the foundation, of all health work, both governmental and volunteer. Recognizing the scientific and professional leadership of the medical group, the governing board of the Maine Public Health Association, at the very beginning of this team-play for health in Maine, asked that your association name for the M. P. H. A. a responsible committee, to which might be referred our policies and programs directly touching medical practice or medical procedure.

Team-play in this manner between the two organizations began at once. It has not been interrupted since. Many instances could be cited to illustrate the close spirit of co-operation which exists between the members of the Maine Medical Association, both as an organization and as individuals, and the Maine Public Health Association. This co-operation has subsequently been developed between many of the county medical societies and county or local

units of the Maine Public Health Association. No clinic of any sort is held by or with or under the auspices of any section or committee of the Maine Public Health Association except with the active participation of the medical group. This team-work covers not only the general policy of the clinics, the selection of the clinicians, but the actual conduct of the clinic itself.

One of the greatest figures on the medical side of public health work in the entire New England area, if not for the entire country, is the Secretary of the Maine Medical Association, Dr. Bertram L. Bryant, who is also First Vice-President of the Maine Public Health Association. It is a pleasure and a privilege to say to you that those of us who are closest to the many activities of the Maine Public Health Association fully realize and quickly acknowledge the invaluable service which Dr. Bryant has given, often at great personal sacrifice, that the great cause of better health for Maine might be advanced.

We would also acknowledge, with the deepest appreciation, the active participation of the editor of your MAINE MEDICAL JOURNAL, Dr. Frank Y. Gilbert, whose years of service on the M. P. H. A. Executive Committee, in close and sympathetic consultation with Dr. Bryant and the other medical members of our Board, have been constructive and helpful beyond my power to describe.

All of the sections of the Maine Public Health Association, the activities of which touch in any way the practice of medicine, are headed up by members

of the Maine Medical Association, and in nearly every instance local societies and committees affiliated with the M. P. H. A. find their chairmen from within the ranks of the Maine Medical Association. We find there is such a thing as proper balance or proportion of medical and lay participation in public health work. Each needs the other and each supplements the other.

Much more of like character could be cited to illustrate the close spirit of team-play and co-operation which exists between the Maine Public Health Association and the Maine Medical Association in the work for better public health, but this paper is limited to twenty minutes and a solid hour would not be long enough to properly set forth the wonderful contribution in service, thoughtful planning and active participation in public affairs that the members of your association constantly give.

Another important member of the team is the Maine State Department of Health, with its diagnostic and water laboratories, its staff of district health officers, its subsidy to full-time local health officers, its Division of Social Hygiene and its Division of Public Health Nursing and Child Hygiene, with a staff of nurses who devote their time to a study of Maine's infant mortality problems and recommendations in that important matter.

The State Health Department, headed by Dr. C. F. Kendall, is Maine's governmental agency in the matter of health. Its functions and its powers are outlined in state statutes and its activities are limited by state appropri-

ations. With the means at its disposal, it is rendering invaluable service to the state, a service that deserves the thanks and the earnest support of every citizen. The closest sort of team-play exists between the Department and the Maine Public Health Association. Great care is taken to see that the work of these two groups does not overlap in any particular. It will be recalled that the Maine Public Health Association, through an appropriation of \$1,200.00 from its funds, made possible the creation of the Division of Public Health Nursing in the State Health Department, pending the time when state appropriations could be made for this purpose. It was the success of the demonstration, made possible through funds from the private agency, which clinched the request of the State Health Commissioner for legislative appropriations for this purpose. By frequent consultation the two organizations, one official and the other volunteer, keep their activities well co-ordinated.

The State Department of Education was early in its realization of the opportunity afforded for health education work in the public schools. Frequently the first knowledge of a threatened epidemic comes through the examinations made by the one hundred or more school physicians and the inspections provided by the many nurses directly in the employ of the school authorities.

No one believes more thoroughly in "prevention" than does our present Commissioner of Education, Dr. A. O. Thomas. And it is largely due to his vision that the unusually effective pro-

gram of health education has been developed in Maine's school system, through active partnership with the Maine Public Health Association in the promotion of the daily health chore system, known as "The Modern Health Crusade." More than 150,000 Maine school boys and girls have received, through this daily health chore system, a practical education in personal hygiene. Hundreds of teachers and thousands of parents bear testimony to the valuable results obtained. The teachers are on record with statements regarding the higher standard of school work performed by their pupils who have taken this course in personal hygiene and the parents bear witness to a marked change in the habits of their children. Boys and girls who formerly insisted on late hours are now going to bed early. Children who formerly drank tea and coffee have renounced these beverages for milk. Thousands of childish eyes are brighter, thousands of childish cheeks are rosier and more plump, thousands of children have less trouble with defective teeth as the result of this work in our public and parochial schools.

This team-play has placed Maine's schools ahead of the schools in all the other New England States in this movement, and for the past school year only one state in the Union exceeded Maine in the national health crusade contest in proportion to population. The first move for a census of crippled children was made by the State Department of Education, and the Department works in close touch with the

Maine Public Health Association in all the clinics for crippled children held by the M. P. H. A. Many cases brought to these clinics are helped in special education by the department through funds available for this purpose.

Nurses employed by the Maine Public Health Association and by local societies and committees affiliated with the Maine Public Health Association are in position to render, and do render, valuable service to Maine schools as a part of their regular work. The teamwork is mutually helpful and is mutually acknowledged as such.

At the request of the chairman of the Board of Trustees of Maine's Tuberculosis Sanatoria a few years ago, the Maine Public Health Association employed a social worker and assigned her to the state sanatorium at Fairfield. This service was continued for one year and was then discontinued by mutual consent. Many of the cases of tuberculosis examined at the Maine Public Health Association's tuberculosis clinics are recommended for treatment in the state tuberculosis sanatoria, and scores of cases discharged from these sanatoria are followed up by our nurses in the field. There is no question but that Maine's sanatoria for the tuberculous is in considerable measure responsible for the reduction in our tuberculosis death rate.

Leaders in the Maine State Dental Society have, for several years, been interested in the work of the Maine Public Health Association, and the President of the State Dental Society,

Dr. Gerald P. Clifford, is serving as chairman of the Maine Public Health Association's Section on Dental Hygiene. Warm and active co-operation between members of the State Dental Society and local groups of the M. P. H. A. has led to the establishment of dental clinics in Gardiner, Dexter and other sections of the state.

The Maine Federated Clubs, both as a state organization and through its local units, is active in health work. Mrs. Florence Waugh Danforth, President of the State Federation, serves on the M. P. H. A. Executive Committee which meets monthly, the State Federation annually endorses our work, many of the local clubs give financial assistance, and in such affairs as clinics, nursing service, educational campaigns, etc., these clubs render signal service in this state-wide campaign of health.

The parent-teacher organizations, too, have given freely of time, money and personal service to this great cause. An excellent example of their spirit of co-operation is found in Bath, where the local P. T. A.'s have united each year in a flower sale for health, which nets more than \$100.00 for this work. Mrs. Sarah Rideout Abbott, who for four years was President of the State Parent-Teacher Association, is a member of the M. P. H. A. Executive Committee and has rendered a service that cannot be measured in dollars and cents. In developing local health work in the various communities of the state, there is no group more interested nor which renders more valuable service than the

parent-teacher group. Again we have team-work in a thoroughly practical way.

Maine's manufacturers, represented on our Executive Committee by their executive officer, Judge Benjamin F. Cleaves, are doing far more for health in this state than is generally realized. Each year they contribute a substantial part of the M. P. H. A. budget. They use health educational material supplied by the M. P. H. A., as well as from other sources, in their mills and shops. Many of them employ their own public health nurses and maintain their own mill dispensaries. They fully realize the great economic value of health in industry, both from the standpoint of production and from the standpoint of community and state progress.

Other State of Maine groups, notably the Granges, the Labor Unions, the nurses' organizations, Chambers of Commerce and others, are actively represented on the various sections and committees of the Maine Public Health Association and are performing an important share of the work for better health in Maine.

And of the greatest importance must be listed the self-sacrificing service given in every Maine county and in nearly every Maine community by men and women in all walks of life, but united by a common vision as they work shoulder to shoulder in developing health work in their own home towns. Much of the burden of raising funds for this work falls on them. Much of the detail connected with the work is performed by them without hope for

acknowledgment or credit. It is due to these public-spirited citizens that local nursing services are maintained, that local clinics are arranged for, that an increasing public support is given their local health officers and that Maine is rapidly awakening to the importance of health as an individual and a community asset.

And of equal importance with any of the team-play outlined in the foregoing is the devotion to the public service which prompts so many of our citizens to contribute liberally of their means for the advancement of health work in the state and in their home communities. Without their financial help, and in many cases their own personal service in addition, Maine could not have recorded the advance it has recorded. The same must be said of the legislature and local appropriating bodies which have had the vision and the foresight to see that funds for the performance of governmental health agencies must be provided.

Our chief mission, as it seems to us, is to arouse in every individual a strong sense of the importance of giving his doctor a chance to help him. We realize that far too many cases are delayed by indifference and ignorance on the way to the doctor's office. We know how badly a physician feels when he loses a case, especially when that case is a man or woman in early or middle life or a child of tender years—lost through failure to consult the doctor in time. For that reason one of our chief activities—determined upon four years ago—is a campaign of education on the

importance of periodic health examinations for young and old. Thus the doctor is enabled to discover beginning disease in time to check it. Thus the citizen is helped to longer life. Thus the community and the state are helped through a longer period of activity on the part of its useful men and women. Thus the home is helped through a lessening of the human misery and unhappiness caused by premature rupture of the family circle.

This is what we call team-work. These are a few of the results which

team-work for health in Maine has accomplished. No one, nor any two or three members of the team could have accomplished so much. They are all needed. All of them have answered the call of their state for public service. All of them have set aside personal differences and private prejudices for the sake of the big idea—better health for Maine. And as we continue in the harness together, we find the load growing lighter and lighter, and our mileage each day is greater than it was the day before.

* PROBLEMS IN THE DIAGNOSIS OF ACUTE APPENDICITIS

By PERCY E. GILBERT, M. D., Madison, Maine.

If any excuse is needed for asking your attention this evening to so common a disease as appendicitis, it is because its mortality is still too great, due to the fact that the diagnosis is often made too late for operation to save the patient. When one reads the description of its symptoms in most of the works on surgery and compares it with his own experience, he is struck with the thought that a late condition, after much harm has been done, is described, and not the early condition, when the diagnosis should be made. Many physicians are prone to delay advising operation early, because the patient does not seem ill enough to require it. Again, patients often feel that a disease, requiring a surgical operation for its cure,

must, of necessity, have equally severe symptoms and wish to wait until sure that the medical attendant is correct in his diagnosis. To change this attitude requires education of both the profession and public. Both must learn that most dangerous and even fatal cases can and do occur with only the mildest symptomatology and slight discomfort to the patient.

During the past few months I have had some six or eight cases that have been atypical in many ways, and it occurred to me that a discussion of appendicitis and the history of these cases might be of interest to others, hence this paper.

The majority of acute intestinal disorders originate in the right side of the

* Read before the Waterville Clinical Society, at Sisters' Hospital, November 17, 1925.

abdomen and the vermiform appendix is usually the offender. If this organ only made its troubles known in one set way, the diagnosis would be equally simple; but, unfortunately, the appendix often displays a set of symptoms that lead the physician to think that anything but it is at fault.

Appendicitis is a disease of early life, and more cases occur in males than in females. Perhaps half of the cases are in persons under twenty years of age. In my own series, the ages run from eleven to sixty, though, as a rule, not many have it after forty years of age. Some years ago, I saw a case of gangrenous appendicitis in a man of eighty-two, who made a good recovery from operation.

Occupation, heredity and nationality have little part in its causation. Sometimes it is a local manifestation of a general infection, as witness the many cases following influenza and tonsillitis. Four of my cases, three of which were proven at operation, came on as an attack of tonsillitis began to clear up. Rosenow obtained in animals nineteen cases of appendicitis out of twenty-nine injected with human tonsillar material. Any condition that interferes with the natural drainage of the appendix, as kinks or adhesions, predisposes to it, and bacteria are the exciting cause. The colon bacillus heads the list, but the staphylococcus, streptococcus, tubercle bacillus and typhoid bacillus are all found. In the past few years, many cases have been reported as due to the invasion of the appendix by pin worms.

In acute appendicitis we have the

catarrhal form, in which the inflammation is limited to the mucous coat and the organ drains into the cecum and recovery is rapid. A more severe form involves all coats of the organ, but if suppuration does not occur, all is well, though recurrence is the rule. In the suppurative form abscess occurs, and this may be in the appendix itself or about it, and walled off by adhesions, so that the general peritoneal cavity is not involved. The fourth form of the acute type is fulminating, in which pathological changes develop rapidly, no protecting adhesions are formed and it is in this that perforation and gangrene often occur. A severe peritonitis often develops, though symptoms and signs, too, may be of the mildest nature.

In May, 1924, I saw a man of about thirty-five years of age, in whom there was no question of the diagnosis, but his pulse was never above normal, his temperature just a fraction over 99° F. and his pain and discomfort very slight and becoming less. So mild were his symptoms that he insisted upon delaying operation from Tuesday until Saturday, against the advice of two of us. Operation revealed a much swollen, gangrenous appendix, with a small amount of pus, and almost no defensive adhesions. He made a good recovery, but his stay in the hospital was much longer than need be, had he followed advice.

There are two chronic forms; one may follow repeated, acute attacks and the other may be chronic from the start. Robert Morris calls this "harmful involution," for the normal structures of the appendix are obliterated and a hard,

fibrous organ results. It is in this form that gastric disturbances are most likely to occur, and unless a careful history is taken and a most searching abdominal examination made, the true cause of trouble may be missed altogether. In about 25% of these last the lumen of the appendix is obliterated entirely. Also the gall bladder often becomes involved and another misleading train of symptoms is set up to trap the unwary.

Microscopic examination of chronic appendices shows carcinomatous changes in about one-half of 1%, which is an additional argument for operation and a suggestion that such an examination be made of appendix tissue.

As a rule, appendicitis cases run true to form and diagnosis is easy, but, often-times, so obscure are the symptoms that it taxes all one's skill to come to a conclusion. In most cases the patient is taken ill suddenly, has a pain in the epigastrium, which may spread all over the abdomen or quickly localizes itself in the right iliac fossa; he soon is nauseated and vomits and after some hours his pulse may be quickened and his temperature rise. Still later there may be a leucocytosis, but opinions differ as to just how much value one should assign to this last. No great dependence can be put upon the pulse and temperature in the beginning of a case. If the pulse is full and rapid and the temperature high, early, the chances are against the case being one of appendicitis.

If our patient has eaten a particularly heavy meal or some indigestible food, not long before he is taken ill, he is

quite likely to attribute his trouble to this, and, indeed, many cases do resemble an attack of acute indigestion. However, this is rather a rare affliction in an adult, and before calling it such, one should rule out appendicitis, gall bladder disease, an ulcer of stomach or duodenum and make sure the heart is not at fault. If none of these are found, it is quite probable that one is dealing with an acute indigestion.

Many patients will lie with the right thigh drawn up, to relax his muscles and ease the pain. Often there are bladder symptoms, resembling a cystitis, and I have seen a pronounced hematuria in one patient. This was never present except in an attack and has not occurred since operation, in 1916. Diarrhœa may be present, and is a most dangerous symptom, for most such cases are of the septic, gangrenous type of disease.

In children under five years of age, the variation of the symptoms is great. The disease is far more common in the young child than was believed not so very many years ago. Dr. Deaver, of Philadelphia, says that every case of abdominal trouble in an infant or small child should be considered appendicitis until proven otherwise.

The appendix may vary in its position in the abdominal cavity and its symptoms do likewise. The disregarding of the differing symptoms in different locations is a common cause of mistakes.

When examining an abdomen it is a good rule to follow to examine last the place of greatest pain, going over the surface most carefully, so as to miss no

other points of tenderness or pain. In some cases there is an hyperesthesia of the skin of the right side of the abdomen, but it is not constant. In the typical case, the point of greatest tenderness is about an inch below the line from the navel to the anterior superior spine of the ilium and about two inches in from the spine on this line, the so-called Lanz's point. Just above this is McBurney's point, and about the same distance from the navel on this line is the Morris' point. These last may both be tender, but not always. The right rectus muscle often is rigid for a short distance near these points, and if there is much peritoneal involvement or gangrene, the entire muscle may be board-like in consistency. Sometimes this rigidity can be demonstrated only upon rather deep pressure. One can sometimes make out a doughy consistency of the ascending colon in these cases, which is more or less characteristic of the disease. Again one may find the left rectus muscle rigid and tender and be sorely puzzled to be sure that the appendix is the trouble maker, remembering, in the male, that left-sided abdominal involvement is comparatively rare, and to do a rectal examination will often clear things up nicely. A vaginal examination in the female should always be made. When the symptoms point to the left side, the following little tricks have been useful. With the patient lying on his left side, the left thigh flexed, extension of the right thigh will cause pain in the right iliac fossa. Reverse the position of the thighs, right flexed and make pressure with the whole hand in

the right iliac fossa and if the appendix is at fault, the patient complains of severe pain there. Patient on his back, fingers of left hand at McBurney's point, abduct thigh to its fullest extent and rotate it internally, at the same time making firm pressure with fingers of left hand. The patient usually asks that pressure be released at once if his appendix is inflamed. Patient in the same position, flex the thigh on the abdomen and rotate it strongly inward, at the same time pressing fingers down over appendix region. This always elicits pain, and it is especially severe if there is a ruptured appendix with a collection of pus over the psoas muscle. Patient on the back, examiner standing at his left, with left hand makes upward pressure on the descending colon, passing the hand up along the abdomen until the epigastrium is reached, where it is held firmly against the skin, and with the right hand quick pressure is made in the right hypochondrium. This forces gas through the ileo-cecal valve and causes pain at McBurney's point if the appendix is at fault. Another sign of some use when the peritoneum has become involved is to make pressure at McBurney's point and suddenly to release it, when a painful sensation results. The utmost gentleness should be used in making these manipulations, lest greater harm be done. There may be pain in the testicle in the male, but is not common.

Since appendicitis may simulate all the chief abdominal troubles, only a few of those most likely to cause confusion will be mentioned. First, and partic-

ularly in children, acute lobar pneumonia is not infrequently diagnosed appendicitis. The rapidity of the respirations and a thorough examination of the chest will show where the trouble is. Here it might be well to say that no examination of the abdomen is complete until the chest has also been most carefully gone over. Diaphragmatic pleurisy might lead one to think the abdomen and not the chest the seat of trouble, if the above were neglected. While the appendix may be involved early in typhoid fever, the history, fever and Widal test will usually set one right. The history, points of tenderness and location of the pain will differentiate an affection of the gall bladder, though oftentimes both are the seat of trouble at the same time. Right renal colic, pyelitis and pyelonephrosis may confuse, but the analysis of the urine will here serve to differentiate the troubles. Vaginal examination and the different history of the two should prevent one from diagnosing appendicitis when salpingitis is the true condition. A perforated and slowly leaking duodenal ulcer has been misdiagnosed appendicitis, but again the history, the usual shock at the time of perforation and right hypochondriac pain will rule out the appendix.

As to treatment there is little to be said, save that the sooner operation is done the better, and there are few who will advocate medical treatment or delay. As there is no sure means of prophesying the outcome of any case, however mild it may seem, the man who advises early operation in all cases will

have a lower mortality rate and fewer regrets than he who temporizes.

If, for any reason, operation cannot be done or delay must be made, the treatment is simply to place the patient in bed, apply an ice bag to the abdomen, withhold all food and medicine and allow only small quantities of water at a time and at infrequent intervals. Physic of any kind should never be given, for an attempt to move the bowels from above, in any acute abdominal condition, until the cause of the trouble is carefully ascertained is a most pernicious practice, and in cases of appendicitis has caused many abscesses and needless deaths. A small, low enema may be given, but no other attempt made at clearing the bowels. It is my own practice to withhold morphine unless absolutely forced to use it, and then to explain to the patient or his family that the relief afforded is only temporary and not benefitting the trouble itself in the least.

To sum up, to make a diagnosis of appendicitis one should note carefully the order of the symptoms, sudden seizure, pain, first in epigastrium or about navel, nausea or vomiting, local iliac tenderness and fever. The only thing upon which one can depend, and which sooner or later is present in every case, is the tenderness in the right iliac fossa.

These remarks are not intended to cover the discussion of appendicitis with any degree of completeness, but only to refresh the memory and lead up to the report of the following cases, which are of interest in various ways.

Case I—R. C., male, age 27. No

previous illnesses of any consequence. Chest examination negative, also urine normal, save for a very positive test for indican, being deep indigo. For eight years has had more or less digestive distress, with a feeling of faintness and some burning in epigastrium and gas in stomach. He always took baking soda to relieve this, also the taking of food usually stopped the distress, which never amounted to an actual pain. Saturday morning ate some indigestible food, and for dinner ate some meat, but not much, for he thought it might be hurt, as the taste was peculiar. Seized about 9 P. M. with general abdominal cramps and severe vomiting. Although bowels had moved that day, he took an enema to see if it would relieve him, which it did not. I saw him late that night. Examination showed a normal pulse and temperature, a soft abdomen and the only tenderness was in both groins, but not great. Ordered another enema, mustard to the epigastrium, some bismuth and gave a hypodermic injection of morphia, for it seemed to me his diet for the day was the cause of his illness. This gave relief, and when I saw him Sunday he felt better, though nauseated some. Pulse and temperature still normal. He was slightly tender over stomach region and to the left of navel, a left McBurney's point, one might say. Abdominal wall soft as could be. Monday forenoon he looked to be a very sick man, septic in fact, yet pulse and temperature were still normal, abdomen soft, save a region in the left rectus muscle opposite navel, and about one and one-half by three inches,

which was slightly rigid and painful. Liver dullness was normal, but there was a small area of dullness low down in the right groin. The vomiting had returned and was almost projectile in type. Removed him to the hospital and called two consultants. My own diagnosis at this time was intestinal obstruction, probably due to volvulus of the descending colon, because of the left sided mass and rigidity, and the marked test for indican in the urine. In going over him again at the hospital, for the first time I found a small tender spot in the right side at Lanz's point and changed my diagnosis to appendicitis. One consultant thought it either diaphragmatic hernia or a leaking, perforated duodenal ulcer. The other did not commit himself, but did remark that, whatever the trouble, it was *not* appendicitis. Operation through a right rectus incision found the abdominal wall edematous, and there was a gush of perhaps half an ounce of clear fluid when the peritoneum was opened. Right iliac region was clear, but almost in the midline was a mass, exceedingly hard in consistency, about an inch and a half in diameter, two and one-half inches in length, adherent to everything near it and projecting out over the brim of the pelvis. The adhesions were easily separated and the mass delivered, which proved to be a gangrenous appendix, wrapped about by a large mass of omentum and containing in its base a fecolith nearly one-half inch in diameter. The appendix and a piece of omentum were removed, drain put in and patient returned to bed. He made a good recov-

ery and went home nineteen days after operation. The position of this appendix and the adherent mass of omentum probably explains the peculiarities of the symptoms and signs in this case. There have been no stomach symptoms since the operation, which was eight months ago.

Case II—O. B., male, age 60. Past history much as above case, only he had at one time taken treatment, mostly by dieting, for a stomach disorder, which he thought was diagnosed an ulcer, but was not sure. Late of a Saturday night ate a very heavy meal of beans, brown bread, doughnuts, cheese and coffee. Was awakened at 3.00 A. M. next morning with severe, general abdominal pain, diarrhoea and vomiting. Took an enormous dose of epsom salts, but it did not seem to relieve him any. I saw him early Sunday afternoon and found pulse and temperature normal, abdomen soft, tender only in the right groin and not much there. Chest and urine negative. Ordered quiet and no food, and gave a few bismuth tablets. Next morning he felt better, but had vomited a few times during the night, mostly bile. Pulse 70, temperature 98.4° F. Abdomen tender all over, but no particular spot, and no more than one would expect from the vomiting. Saw him again in the afternoon and conditions were about the same. Tuesday morning, forty-eight hours after illness began, the pulse was 88, the temperature an even 100° F, and there was some right-sided tenderness, no rigidity and well out in the right flank tenderness was exquisite. Sent to hospital at once and operated,

finding an adherent appendix, with beginning gangrene, located retroceally. Removed and put in two drains. About four hours later patient began to vomit material having the appearance of coffee grounds and continued to do so at intervals for four days, when it stopped as quickly as it began, whether of itself, or due to the calcium chlorid, bismuth subnitrate and magnesium carbonate, given in powders every four hours. I do not know. There were some tarry particles in the stools all this time, too. His pulse rate ranged from 120 to 160 most of this time, and the convalescence was pretty stormy. However, he made a good recovery finally and went home four weeks later. This gastric hemorrhage is a thing I cannot account for satisfactorily, and have been unable to find anything about it in several surgical works. Morse, in his book on Post-operative Treatment, mentions such a complication and dismisses it with the comforting statement that it is usually fatal.

Case III—W. E., male, age 16. Always in good health, except had measles some years ago. Chest and urine negative. About the middle of the forenoon on the 25th of July, was seized with severe pain about the navel, and soon after vomited his breakfast and then some bile. Bowels had moved earlier in the day. I saw him about 7 P. M. The boy looked sick. His pulse was 66 and temperature 97° F. The right side of the abdomen was soft, but rather tender upon deep pressure at Lanz's point. The left rectus muscle was rigid almost its entire length. Took this lad to the

hospital and operated as soon as possible. Right rectus incision made and the left side of the abdomen explored to learn if possible cause of rigidity, but none appeared. Appendix was adherent for its length to cecum, about one-third way back from tip a band constricted it tightly. The organ was nearly five inches long, much swollen and congested, as were also the cecum and about eight inches of the ileum. This boy went home well in ten days.

The next four cases I will mention only briefly, for they all followed attacks of follicular tonsillitis. The first, a girl 13 years old, had been ill of tonsillitis ten days before and was fully recovered. About noon, the 8th of last June, she was seized with abdominal pains and began to vomit. I was called in the early evening and operated that night. Her chest and urine were negative, pulse and temperature normal, abdominal wall soft, but she could hardly bear the weight of one's fingers at Lanz's point. I found a long, adherent appendix, swollen and congested, which was removed, and a bridge of tissue from ileum to cecum, causing the ileum to be kinked, was cut and its raw surface covered. Good recovery in this case.

July 2nd, about 10 P. M., was called to see E. D., a boy of 11 years, who had been ill two weeks, first with diseased tonsils, then his large joints became swollen and painful, but improved after a day or two. Some five days before I was called he began to have pains in his "belly," as he told me, and a large dose of castor oil was given, but he did not improve. Examination showed a poorly nourished and septic looking boy. The whole right side of the abdomen was rigid, painful to the touch and swollen; a mass, some three by five inches seemingly, just under the right rectus muscle. Lungs negative. Heart much enlarged, with a mitral, regurgitant murmur,

heard all over the left chest and transmitted to the mid-axillary line. Tonsils completely filled the pharynx. Operated as soon as we could get him to the hospital. Found a large quantity of pus in the right iliac fossa, apparently in five separate pockets. Appendix retro-cecal, adherent. When I had it about half freed the boy stopped breathing, became extremely cyanotic, and his pulse disappeared at the wrist. Because of this and his heart condition, the operation was stopped at once, a drain put in and the boy returned to bed. He was desperately sick for about a week, when he began to gain, and in three weeks was ready to go home. I removed his tonsils before he left the hospital and now he is in fairly healthy condition, and while the cardiac murmur persists, he is free from heart symptoms, which he was not before.

About mid-July I was called to see a boy whose throat had been very sore the week before. A day or two after it improved he began to have abdominal distress and to vomit. I was called and found both pulse and temperature increased, right side of abdomen tender and rigid. Operation was advised and his people took him to Bangor, where operation was done and an appendix, with a spot of gangrene at its tip, was removed.

A day or two after this I saw a girl of 11 who was recovering from an attack of indigestion, her parents informed me, and they wanted an explanation of the soreness in her side. She had been sick several days, with pain and vomiting, but when I saw her there was left only a tender right iliac fossa, and while operation was advised, it was refused, and so the diagnosis could not be confirmed. A week before she had her attack her tonsils had been inflamed and her throat very sore. The tonsils were of the large, ragged variety and the nodes at the angle of the jaw enlarged.

JOURNAL OF THE MAINE MEDICAL ASSOCIATION

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EDITORIAL COMMENT

Health Education for Maine

We commend to our readers the article on "Maine's Team Work for Health," appearing in this issue. The author is very modest, and one does not readily grasp the vast amount of work he has accomplished in a few years. With some few years' live newspaper training, together with ten years in active public health work in the Central States, he came to Maine with a plan for public health education which has proven so satisfactory that it is well known over the country as the "Maine Plan."

Instead of having six or eight national groups coming into Maine as separate units soliciting funds and organizing separate units to carry on their work, they are all represented by the Maine Public Health Association, with its affiliated County Health Units, and through the broad vision of the National Tuberculosis Association the funds raised from the seal sale of the National Tuberculosis Association has been a large factor in financing the local health educational work of all communities of the state.

The M. P. H. A. seeks advise and council of the Maine Medical Association, the State Department of Health and the Department of Education, as well as all other state organizations, in all matters pertaining to the health of the people, and expects the same affiliation carried through the county units. In other words, the M. P. H. A. stands as a co-ordinating force uniting the Public Health Department and Department of Education with all other volunteer health organizations, etc., in an effort to work out a constructive program of health education, which will cover all phases of health work, bringing to people in all walks of life, wherever situated, true information on health problems from authentic sources.

The earnest co-operation of the Department of Health, the Department of Education, the Maine Medical Association and all state organizations is ample evidence of the success of the "Maine Plan" in Maine.

Furthermore, the character and standing of the men and women who are serving on the Board of Directors and

the Executive Committee bear added testimony that the "Maine Plan" is well worth their sacrifice of time and money. It is earnestly hoped that all

medical men will carefully study the "Maine Plan" as outlined by the M. P. H. A. and get behind it.

COUNTY NEWS AND NOTES

Androscoggin County Medical Society

The regular meeting of the Androscoggin Medical Society was held at the Dewitt Hotel, Lewiston, Me., March 23, 1926.

The meeting was called to order by Dr. W. W. Bolster, President.

Records of previous meeting not read.

Dr. Lucy O'Connell-Desaulnier's application for membership was voted to go through the usual channels.

Dr. Geo. O. Cummings, of Portland, gave a very interesting talk on "Rheumatism from the Standpoint of Focal Infection."

Dr. Josephine Neals, of New York, also gave a very good lecture on "Cerebrospinal Meningitis," which was appreciated by members of the society.

There were present: Drs. W. W. Bolster, C. E. Norton, W. E. Webber, J. E. Dupras, E. B. Buker, E. C. Higgins, R. A. Goodwin, E. V. Call, W. J. Fahey, R. N. Randall, Wm. L. Haskell, B. W. Russell, John Sturgis, E. F. Pierce, E. N. Giguere, J. E. Poulin, Alton Grant, E. Leathers, C. C. Peaslee, L. O. Roy, A. A. Cobb, R. J. Morin, H. Sprince, Lucy O'Connell-Desaulniers and L. J. Dumont.

L. J. DUMONT, M. D.,
Secretary.

*Portland Medical Club

Abstract of paper entitled "The Present-Day Study of Clinical Asthmas," by Dr. Sylvester:

It is not our purpose to give here a treatise on asthma, but to point out, from observations of the asthma clinics of this country, the popular methods of diagnosis and treatment, with special reference to differences of opinion. We assume that the profession at large accepts these basic opinions; that there has been an evolution of asthma from a disease entity to a study in hypersensitiveness, in anaphylaxis, in bronchospasm with subsequent asthmatic bronchitis; that certain dusts of pollens and animals innocuous to the great majority cause bronchospasm along with other phenomena called anaphylaxis; that it is possible by some sort of skin tests to reveal this oversensitiveness of mucous membrane; that certain nasal pathology and certain reflex neuroses may also produce the identical condition of bronchospasm in asthma. After stating that we have found this sensitiveness to be often hereditary and sometimes acquired, we pass from primary asthma, with the discussion of differences in subcutaneous, intradermal and extra-dermal technic of diagnosis and desen-

*Abstract of papers and stenographic notes of the February meeting.

sitization, to the discussion of bacterial asthma, of bacterial infections in respiratory diseases which may alone bring on asthma, and which usually, sooner or later, by secondary infection, progressively develop an asthmatic bronchitis, emphysema and myocardial pathology.

There are at this date charts of 6,236 asthma patients at the New York Hospital on 16th St. A dozen other hospital clinics from here to Washington can also show a constantly increasing clinic attendance. There is something to be learned from all these, more than from the text of a hot-air theorist. . . . Of the most common use during the past year is a solution of house dust for diagnostic test and subsequent desensitization of non-reactors to pollen and animal dusts. We have personally objected to this as untelligent. Our notable failures in the out-patient clinic have been in dust asthmas with no specific animal sensitization. We are out-voted—and the majority may be right.

Our personal experience has shown a large number of asthmas beginning with incompletely resolved pneumonia, measles, pertussis and influenza. These react positively to subcutaneous bacterial tests. A smear of sputum often shows predominance of the infecting organism, but neither it nor even the culture is selective of pathologic organism. When history, physical signs, bacterial reaction, and microscope agree, we consider the diagnosis reasonably established. There is great controversy over vaccines, yet the consensus of criticisms is against the polyvalent concoctions of manufacturers. It is

conceded that to be successful we must be sufficiently intelligent to adapt a vaccine to selective individual pathology. Our results in the use of vaccines seem to confirm the popular reports of other clinics and of such a critical observer as Chandler Walker.

The outpatient clinic of the Maine General Hospital has not been maintained a sufficient length of time for end results to have statistical value, but the classification of asthmas presenting for even the small number may be worth consideration.

Report of Asthma Clinic, Feb. 22, 1926:

Total number cases admitted to	
clinic,	91
Reactors,	64
or	69%
Of these,	
Pollen sensitive,	37%
Animal sensitive,	20%
Bacterial sensitive,	25%
Food sensitive,	6%

Summary of remarks on "The Bacteriology of Asthma," chiefly relating to sputum cultures, by Dr. Mortimer Warren:

The bacteria I have used are:

- Staphylococcus Aureus.
- Streptococcus Viridans.
- Non-hemolytic Streptococci.
- Staphylococcus Albus.
- Streptococcus Hemolyticus.

Selection of the vaccine for use in our clinic has been by the method of Rachemann, *e. g.*, subcutaneous inoculation and selection by means of the presence of a local reaction at the site of inoculation.

Dr. Francis Welch opened the discussion by saying that the main thing to be desired is a careful history of the patient, a thorough examination and X-ray. Any patient over forty years old is, in my opinion, bound to be a bacterial case, and the older he is the greater amount of hypersensitiveness exists. Winter is an especially hard time. The trouble with vaccines is to find the specific organism to which he reacts, and for this tests must be made and the vaccines prepared accordingly. More satisfactory reactions are obtained from autogenous vaccines.

Dr. Smith stated that he believed most asthma was due to nasal pathology, affecting the sinuses and more particularly the maxillary antra, and that free opening and drainage of the latter was advisable in the majority of cases. Heredity is demonstrated by the fact that similar nasal deformities pass from parent to the child.

Dr. Stanwood Fisher asked the following questions: Does Dr. Sylvester take X-rays of the sinus? If you have infected sinus what results do you get from vaccines? What percentage of his asthmatic cases are of nose and throat origin?

In closing, Dr. Sylvester said: "I do not advocate the use of vaccines without first correcting any existing pathological condition. Some nose and throat men state that the intensity of infection in some areas, which did not do well after operation, was relieved by the use of vaccines. I think that was very reasonable. To give vaccine for infection which has been a long time

under drainage was so ridiculous to me that I did not speak of it."

Franklin County Medical Society

The annual meeting of the Franklin County Medical Society was held at the Exchange Hotel, Farmington, November 18, 1925.

The following officers were elected for 1926:

President, E. B. Currier, Phillips.

Vice President, Thomas Croteau, Chisholms.

Secretary and Treasurer, G. L. Pratt, Farmington.

Delegates to M. M. A., J. E. Cartland, Kingfield; Alternate, E. B. Currier, Phillips.

Censor for Three Years, John Moulton, Rangeley.

After an excellent dinner, Dr. T. E. Makepeace read a paper on "The Medical Cults." Miss Johansen, the public health nurse, spoke on her work. Dr. Geo. H. Coombs, of Augusta, showed some very entertaining motion pictures.

Thirty-one members and guests were present.

GEO. L. PRATT,
Secretary.

Penobscot County Medical Society

Tuesday evening, March 16, 1926, the Penobscot County Medical Society held its regular meeting at the Bangor House.

Dr. George R. Minott, Boston, Mass., gave an interesting paper on "Certain Aspects of Disorders of the Blood and Blood-Forming Tissues."

The minutes of the last meeting read and accepted.

Benjamin Berkwitz, M. D., voted to membership.

The business meeting was at 7.30; dinner at 8.00.

The following were present: Luther S. Mason, M. D., George R. Minott, Boston, Mass., A. W. Fellows, S. N. Marsh, West Enfield, D. A. Robinson, H. D. McNeil, J. F. Cox, J. B. Thompson, J. F. Starrett, A. K. P. Smith, L. H. Smith, Winterport, E. E. Brown,

H. C. Knowlton, Hampden, C. J. O'Brien, F. B. Ames, J. A. Lethiecq, Brewer, H. M. Goodwin, W. E. Fellows, B. L. Bryant, E. W. Russell, J. R. Varney, Old Town, J. D. Clement, W. C. Hall, Orono, M. W. Emerson, A. E. Small, L. F. Wright, H. E. Thompson, J. P. Russell, H. W. Johnson, E. S. Merrill, M. C. Madden, J. H. Johnson, E. L. Herlihy, C. B. Popplestone, Benj. Berkwitz, F. L. O. Hussey, Old Town, Daniel McCann, H. L. Hunt, Joseph Lezberg, Kenduskeag.

PERSONAL NEWS AND NOTES

Dr. Cornelius J. Taylor has been appointed Medical Examiner for Penobscot County.

Among the physicians elected to be mayors of various cities in Maine we note Dr. R. J. Wiseman, of Lewiston, Dr. Herbert C. Libby, of Waterville,

Dr. L. W. Hodgkin, of Ellsworth, Dr. F. C. Small, of Belfast, and Dr. G. C. Precourt, of Biddeford. We congratulate them on their election and trust that all will go well with them during their respective terms of office.

NOTES

U. S. Veterans' Bureau

At the request of the American Legion and other agencies, General Frank T. Hines, Director of the U. S. Veterans' Bureau, upon the recommendation of Dr. Crossman, Medical Director, has appointed a Board of Medical Officers to conduct an investigation, and make an intensive study of the residual effects of warfare gases.

The members of this Board are:

Dr. A. K. Krause, Member of the Group on Investigation and Research of the Medical Council of the U. S. Veterans' Bureau, and Associate Professor

of Medicine at Johns Hopkins University.

Lt. Col. Harry L. Gilchrist, M. C., U. S. A., Chief of Research Division, Chemical Warfare Service, United States Army.

Dr. Philip B. Matz, Chief, Medical Research Sub-division, United States Veterans' Bureau.

This Board held its first meeting March 9, 1926, at the U. S. Veterans' Bureau, and it was decided to begin the investigation at once. This will necessitate the study of the present status of some 70,000 men who were

Concluded on page XII



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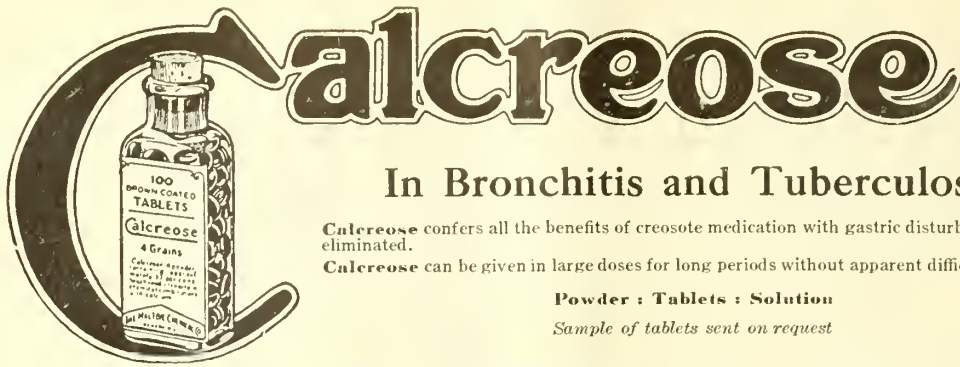
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Continued from Page 82

gas casualties during the World War, and will extend over a period of twelve to eighteen months.

Outside of the knowledge obtained from experimental work on animals, very little is known about the remote effects of the various war gases on the

body economy. This investigation is purely a scientific one, the findings of which will be not only of clinical value to the ex-service men and the Veterans' Bureau, but is being looked forward to with a great deal of interest by some of the other governmental departments.

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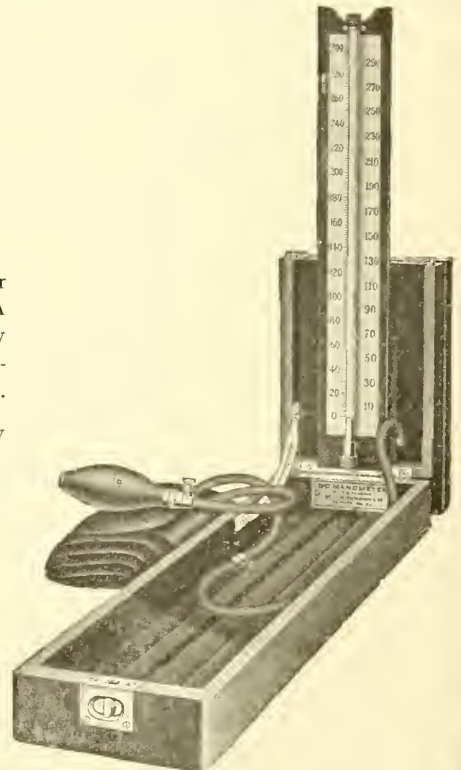
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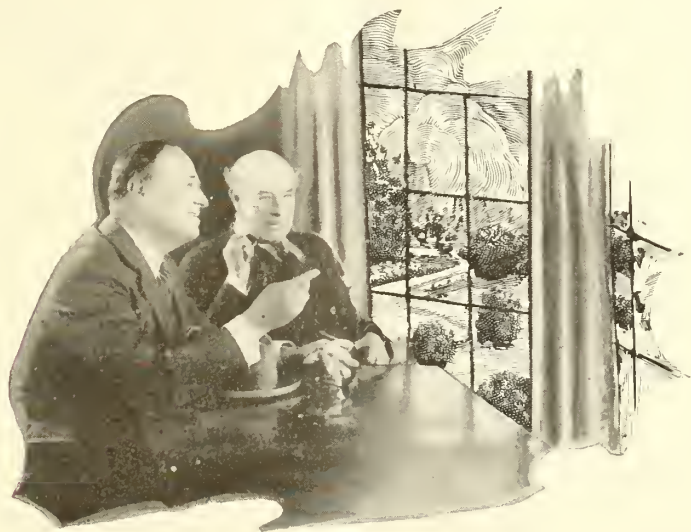
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"Yes, doctor—and Hay Fever!"

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pected onset of the usual seasonal occurrence in order to desensitize the patient by the time that the offending pollens make their appearance."

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NOTICE

American Board of Otolaryngology

The American Board of Otolaryngology has arranged for two examinations during the month of April as follows:

St. Paul's Sanitarium, Dallas, Texas, Monday, April 19th, at 9.00 A. M.

Stanford University Medical School, Clay and Webster Streets, San Francisco, California, Tuesday, April 27th, at 9.00 A. M.

Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

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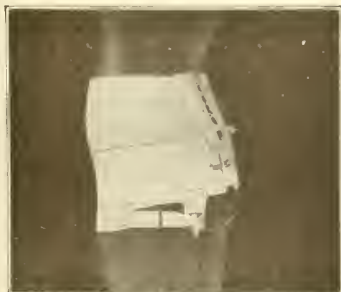
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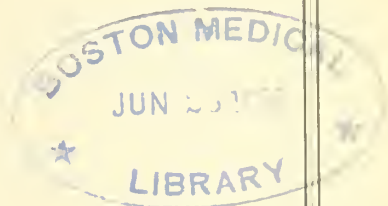
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THE JOURNAL

OF



THE



Maine Medical Association

The Official Organ of the State and County Medical Societies

VOL. XVII, No. 5

MAY, 1926

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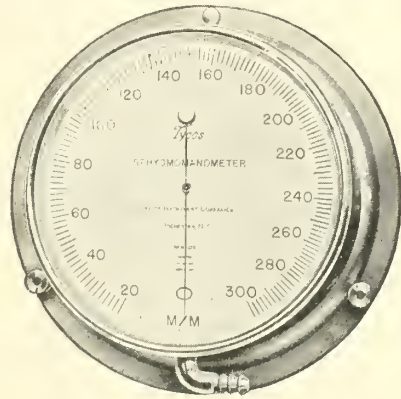
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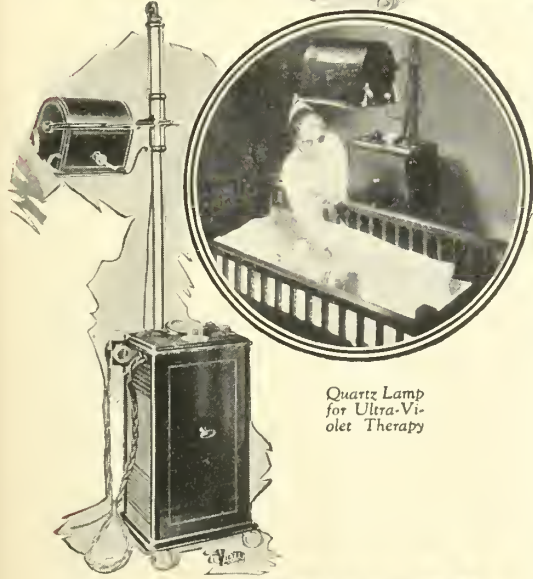
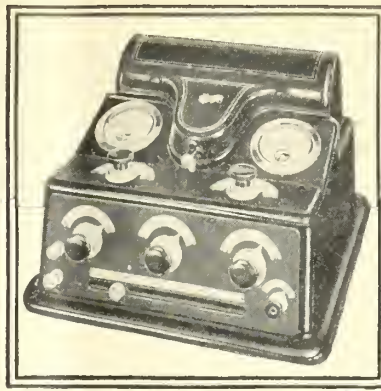
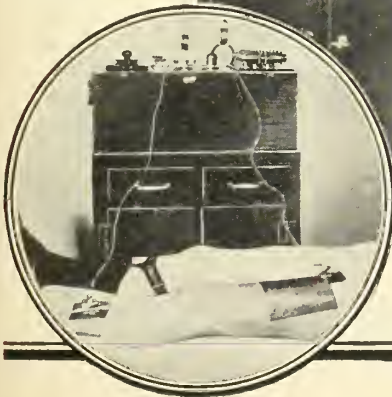
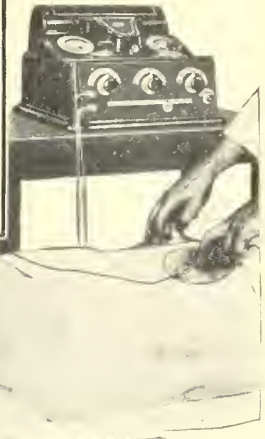
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VOL. XVII.

MAY, 1926

No. 5

*COMMITTEE REPORTS

SECRETARY'S REPORT

As this report is to appear in the May JOURNAL, one month before the close of the current year of the Association, a final report of membership and financial standing will be given to the House of Delegates at the annual meeting.

The last directory of the American Medical Association gives this state credit for 1,047 physicians. Of this number, at least 147 can be considered as deadwood, or not in active practice; of the 900 remaining, 785 held membership in our Association during the past year. Each County Secretary and District Councilor was furnished a list of these physicians not members in his locality, and were asked to try to get into the Association all physicians eligible for membership. It will be interesting, in our final report, to see how well they have succeeded. From our knowledge of conditions, from 800 to 850 would include all desirable for membership.

It is with great satisfaction that we

are able to report that the House of Delegates of the A. M. A. during the year voted to give each state one delegate to that body for every 750 members, and one for the fraction over that number. Our Association for the first time is given two delegates, one to be elected at the next annual meeting. Of the other New England States, New Hampshire, Vermont and Rhode Island have one each, Connecticut two, and Massachusetts six. As this added representation in the National House is of considerable importance, the County Secretaries and Councilors should make every endeavor to keep up this quota.

Your Secretary this year has been able to considerably lighten the burdens of this office by turning over to his private secretary the greater part of the routine details. We have endeavored to give in this way better service to the Association. All correspondence has been promptly answered and a larger contact made with the A. M. A.

The Council has been unusually ac-

*These reports will be considered and acted on by the House of Delegates at the Poland Spring session. See that your delegate is properly instructed.

tive and helpful. Two meetings have been held during the year, besides their co-operating in the meetings of the County Secretaries and other officers.

The two Secretaries' and Officers' meetings, held as usual in Bangor and Portland, were of unusual interest. Both were well attended, and the members showed a much keener and broader interest in the affairs of the Association. All subjects of interest and vital to the Association were brought up and freely discussed. These meetings should act as a clearing house for the county societies, and we hope that full reports are returned by their Secretaries and officers for discussion in the local societies.

It is very important for these societies that they elect the most active man they have as Secretary for a term of years, and, if necessary, pay him for the work, but at least pay his traveling expenses to both these meetings and see that he attends. In this way every member should be acquainted with the activities of the Association and their delegates chosen from the best men to carry out their wishes in the House of Delegates at the annual meeting. Don't send your delegates to knock unless you have some well-thought-out, constructive plan to offer which will always receive careful consideration. This is no one-man job; every member is responsible. Heavy bodies move more evenly, as a rule, from a steady, concerted pull ahead than from any number of kicks behind.

BUSINESS REFERRED FROM LAST MEETING

The first resolution referred back to the county societies by the House of Delegates for their consideration is as follows:

"That it shall be the policy of members of this Association to charge to corporations or insurance companies the same fees for services as they would to their other patients in private practice. All instances of disagreement may be referred to the Committee of Public Relations for conference."

At the last meeting of the State Secretaries, a prominent adjuster from one of the insurance companies was invited to present their side of the question. He admitted that there had been considerable misunderstanding regarding physician's fees and that the fault was not entirely with the companies; that the physicians, as a whole, were moderate and fair, but in certain communities of the State they were not. He felt that most of the companies would be very willing to meet a committee of the Association and thrash the matter out and see if they could not come to some general understanding. He was quite certain that a resolution like the above would be acceptable to most of the companies. As the Committee of Public Relations report no business this last year, it might be a good thing to advise them to call a conference and begin to take on this much-needed work.

2nd. "That in the future physicians of the Association neglecting to take out indemnity insurance shall have the same assistance from the Association in their defense as the other members, but that the Association be no longer responsible for their attorney fees."

We cannot see any reason why, by a simple vote of the Delegates, the regulation of the defense agreement cannot be changed to correspond to the wording of the above resolution. It certainly is not fair that those members

who protect the Association from expense by their insurance should be taxed to help the one who neglects to do so.

3rd. "That the Association fix a minimum fee for life insurance and health examinations of five dollars."

Most of the insurance companies have now a fixed fee of five dollars. Those who have not should, and a united profession could easily bring it about.

As regards health examinations, the work is much the same as in insurance, and the object in this new field is to suggest a fair, average fee. The poor we will always have with us, and at times the wind must be tempered. Those needing or demanding a more extended examination than the average should pay more.

MEDICAL CLINICS

In several of the states an attempt is being made to give the physician of the county societies the advantage of medical clinics and postgraduate work. In some of the medical schools of the state universities this is a part of the extension work. In states having medical schools it is easy to obtain teachers who can go out in groups and give courses and dry clinics for several days to different county societies. We have the same need here in our own state, and, having no medical school to depend upon, the tendency is at present to bring men here from outside the state for our county meetings. This is an excellent plan for part of the time, but we should not fail to develop our own home talent. Every physician has interesting cases, and part of the meetings should be planned as local dry clinics.

In even small hospitals there is always a wealth of material which could be utilized for this work, and it is too bad that it should not be shared with

all the local members of the profession. Every larger hospital should be made a teaching center. The work there should be so organized that at least once or twice a year a two- or three-day clinic could be given, and the whole profession in that locality be invited to attend. These hospitals should be accessible for county society meetings and they should be in much closer touch with the general medical profession than they are at the present time. Some hospitals are already offering regular clinics, with the hearty approval of staff and trustees. To encourage this work the House of Delegates appropriates a certain sum each year which should be continued.

Our JOURNAL should be made a medium for the exchange of medical ideas and for the reporting of interesting and unusual cases from the different countries. The fact is, we are either too lazy to report these cases or are not public-spirited enough to try to help others in the profession.

A symposium on this subject might be interesting in the JOURNAL or at some of our meetings.

REGULAR HEALTH EXAMINATIONS

More attention is being aroused to the great value of regular physical examinations—possibly more interest with the public at large than with the physicians. We deprecate the name "periodic," as has been widely used in connection with this work. It would at first glance make us feel that it applied more to women, not including men and children. In connection with the State Secretaries' meeting at Chicago in November, part of the session was devoted to regular health examinations, and its importance and success assures another combined meeting there in November.

Presidents Haggard and Phillips, of

the American Medical Association, are giving most of their time to this subject, considering it most important, as will be seen in reading their addresses before the Association. Nearly all the medical schools of standing are training their students to make these examinations.

During the year we have sent each of our members a copy of the latest manual, which contains a copy of the blank printed by the A. M. A. and a simple blank of our own, with a letter urging our members to take up the work. Arrangements have been made with the Thomas Burr Printing, Company, of Bangor, to print these blanks and furnish them to order. The A. M. A. blank can be obtained by writing to 535 No. Dearborn Street, Chicago.

It has been our opinion and experience, from being first in the field, that the first thing to be accomplished is the education of our members to make thorough physical examinations and keep case records on as many of their patients as possible, advising them to return at regular intervals to be checked up. In time, from this beginning, better examinations will be made and the necessity for a general health survey with advice for general living will be appreciated. For this reason, the simpler blank has been provided, not underestimating the value of the full examination. Most of us are not in the Packard class, but there is no reason why we should not crank our Lizzies and make a start, with hopes of better things.

The idea of regular health examination is being fast sold to the public, together with the knowledge of what they should receive when they apply to their family physician. If he is unable or unwilling to supply the demand, some physician will be found who can and will.

With this warning, we can only sit back and let nature take its course. Every county society should devote at least one meeting a year to demonstrating how such examinations should be made and furnish the subject from their own membership. One such county has responded this year. Who will be the next to keep the ball rolling?

PUBLIC HEALTH

We wish again to report the activities and pleasant relations we continue to hold with the various health organizations of the state.

In the rapidly expanding program of the Maine Public Health Association, we find more physicians enrolled in the directorate, helping to plan and carry on the work. Everywhere there has been the best of co-operation and good feeling, and an increased number of physicians have become members of that Association. Its genial Secretary, Mr. Thurber, has always welcomed any suggestions from the profession and has been very insistent that no work should be undertaken in any county without the advice and consent of the county society. We are very fortunate to have him for another year to help continue this work on a scientific foundation.

We have been obliged to slow up the clinics for crippled children because such a large number had been examined and listed who needed help and for whom there were no hospital facilities. These unfortunates, in so far as possible, are being cared for by the various public health nurses. We need a much larger number of hospital beds to carry on this work.

The Maine Public Health Association, in addition to its other activities, now has eight public health nurses under its direction and the supervision of

that work in six counties. Its budget calls for the raising and expending this year of \$50,000.00. The medical profession is given a large share in the direction of the expenditure of this considerable amount.

The State Board of Health asks for our co-operation in helping them carry on their work. They ask that we report our cases promptly of infectious and contagious diseases, that they may be investigated and kept in control; that we should assist in helping to prevent the spread of disease by a more careful and conscientious examination of the food handlers to minimize the danger of food contamination; to report promptly all births and deaths under our care. These requests are reasonable and urgent and should receive our hearty co-operation.

MEDICAL DEFENSE.

There is still some question among our members as to how much they are protected by their insurance policy and to what aid they are entitled from the Association through the Committee of Medical Defense. By carefully reading your policy, you will find that it carries indemnity for \$15,000; \$5,000 for any one suit, or three suits in one year will be cared for. This includes the inspection and getting together of the facts and witnesses in the case by an adjuster of the Company, attorney fees and indemnity, if the suit is lost, up to \$5,000.

This policy is sufficient to cover any man in general practice. An exception is made for those running a private hospital, those doing contract practice, and those using X-ray or radium. For these a special clause is added in the contract and the cost of the policy is increased as an extra risk.

The Association retains an attorney, who handles all suits but is paid by the insurance company. The Association furnishes all expert medical testimony, and its committee, when requested, assists in the preparation of the defense, and by the present act, unjustly agrees to pay all attorney fees for those members not insured.

According to the present arrangement, the committee is composed of five members from different parts of the state. When a case is reported to the Secretary, the nearest member is notified to assist the adjuster in his investigation and use his good offices to prevent suit or make a satisfactory settlement. In certain cases, it is necessary to call the whole committee together for conference. This arrangement so far has worked very well, as there is always a member of the committee near by for any emergency. During the past year it has been necessary to call the committee together but once.

B. L. BRYANT,
Secretary.

REPORT OF DELEGATE TO A. M. A.

The reports of the action of the House of Delegates are published so soon after the meeting, in the *Journal of the American Medical Association* and *Bulletin*, that before your delegate can make a report, the news is old to those who are interested in these journals.

The work of a delegate is to get to the place of meeting two days before the regular session begins. He puts in three days of rather strenuous work listening to reports and new business and serving on reference committees and making reports to the House. It is also

one of his duties, to help select the best men as officers for the Association. A man must serve as delegate for a number of years before he is of any great value. Many states make it a rule to return their members for as many years as he will serve. Some have been in the House for twenty-five years or more.

While the alcohol question would be of little interest to any of us in this state, whichever way decided, it seems now quite certain that by a decision of the Supreme Court, in those states where alcohol can be prescribed, under certain safeguards a physician can furnish for his patients as much alcohol as he may think necessary for any illness. With this decision it will be a relief to have the matter settled, and in the future not to see placarded on the front pages of all dailies, "The Docs Want More Rum."

Another matter of interest which will undoubtedly be pressed at the next session was an amendment to the by-laws to regulate membership in the state and national associations. At present the county society has the full power to select their members, and they automatically make the membership of the two higher associations. No matter how bad their record may be, they must be accepted, and there is no way to remove them except to prefer charges in their county society. This has always been unfair, and the new amendment provides that each Association may have the power to select its membership. While this power will not be used often, it will relieve an embarrassment which has been long felt.

The City of Dallas was very hospitable and did everything in their power to make the meeting a success.

It was voted to hold the next meeting in Washington, to which we will be able to send two delegates.

B. L. BRYANT.

REPORT OF TREASURER

Following the vote of the House of Delegates, six one-thousand-dollar Class A bonds were purchased by your Treasurer, at a cost of \$6,155.70, bearing interest from 5½ to 6%. Five thousand was from surplus money of the Association, bearing small savings bank interest, and one thousand from the Thayer fund.

On the death of Dr. Whittier, Chairman of the Committee of Venereal Diseases, there was turned over to the Treasurer twelve shares of stock of the American Agricultural and Chemical Corporation. This was given by a friend to Dr. Whittier as the nucleus of a fund to carry on this work. This stock has not paid dividends for several years.

There has been recently transferred to us \$604.11 from the savings account of that committee. This has been deposited in the savings bank, together with \$25.00, the amount voted this year, to be drawn upon through the Treasurer by the chairman for the needs of that work.

All these separate accounts make the work of the Treasurer more complicated.

The report of the fiscal year will be given to the House of Delegates.

We wish to thank all the officers of the Association, and especially most of the County Secretaries, for their prompt co-operation in reporting the new members and other changes in the membership of their societies.

A good time is planned for us at Poland Springs and we hope every one who can, will be present and make this a record meeting.

BERTRAM L. BRYANT,
Treasurer.

REPORT OF THE COUNCILOR OF THE FIRST DISTRICT.

The Cumberland County Medical Association has had a very prosperous year, with four regular meetings and large attendance. There are now 198 members; 17 members have been admitted and 7 members have died during the year. There have been four regular meetings. In October, Dr. de Normandie, of the Harvard Medical School, read a paper on "Eclampsia"; in December, Dr. Hamilton, of Harvard, read a paper on "Diseases of the Thyroid"; in January, there was a conjoined meeting of the Association with the New England Heart Association, with a clinic at the Maine General Hospital, followed in the evening by addresses by three members of the Heart Association, and in April, by a clinic at the Maine General Hospital on "Indigestion and Certain Stomach Diseases," conducted by Dr. Palfrey, of Harvard, who also read a paper on "Indigestion" in the evening. The clinics at the hospital were very largely attended and many patients were presented, illustrating the various conditions under discussion. The thanks of the Association were tendered to the different persons who planned and carried out the details of these clinics.

The experiment is being tried this year of having a stenographer present at the regular meetings to report the discussion of the papers, so that this,

together with an abstract of the paper, can be printed in the State JOURNAL for wider reading and study.

The Councilor for this district, the Cumberland County and York County Associations, has noticed with much interest the attendance of members of either Association at regular meetings of the other Association, a fact that speaks well for good fellowship and the personal value of high-class study and experience.

The Cumberland Medical Association has purchased recently a special type of projection lantern, by which not only the usual glass slides can be shown, but also illustrations of any kind, as well as the printed page itself, can be thrown upon the screen. It is self-evident that the usefulness of such an apparatus is unlimited.

The Secretary of York County reports a membership of 76, with admission of one new member and no member lost through the year. There have been three regular meetings. In October, at Sanford, at which Dr. Lord, of the Harvard Medical School, read a paper on "Some Types of Pulmonary Disease"; in January, at Biddeford, when Dr. Denning, of Harvard, read a paper on "Encephalitis Lethargica," and in April, at Biddeford, when Dr. Lahey, of Harvard, held a clinic at the Webber Hospital on "Goitre and Diseases of the Esophagus," and in the evening read a paper on "Management of Diseases of the Biliary Tract." All these papers were of a high order of scientific and experimental research, and the several meetings were well attended. A number of the Portland doctors were present at these meetings by invitation.

The York County Medical Association is to be congratulated that its Secre-

tary, Dr. George Precourt, was recently elected Mayor of Biddeford by a large majority over the opposing candidate.

STANLEY P. WARREN,
Councilor.

REPORT OF COUNCILOR OF SECOND DISTRICT.

As Councilor of this District I will report that the visitations have been made, finding that

Androscoggin County Society has held its usual meetings, with much interest and profit to its members.

Franklin County Society has held its meetings, with its customary numbers and its members are manifesting interest.

Oxford County Society maintained its usual meetings, which have been instructive and entertaining.

JOHN STURGIS,
Councilor.

COUNCILOR OF THIRD DIS- TRICT.

No report received.

REPORT OF COUNCILOR OF FOURTH DISTRICT.

I am pleased to report, as Councilor of the Fourth District of the Maine Medical Association, that the meetings in our district have been more regular and better attended than ever before in the history of the Association. Many interesting papers have been presented, both by local and out-of-the-county men. Most pleasing has been the lively discussions following papers, with, I believe, as much benefit to the members

as the papers themselves. I am keenly interested that more of the county societies give at least one meeting a year to physical examinations. All in all, our section of the state has had a prosperous year.

Respectfully,
GEO. E. YOUNG,
Councilor.

COUNCILOR OF FIFTH DIS- TRICT.

No report received.

REPORT OF COUNCILOR OF SIXTH DISTRICT.

As Councilor from the Sixth District, I beg to submit the following brief report:

In October it was our privilege to be present at one of the meetings of the Aroostook County Society at Fort Fairfield. The details of this meeting have been reported by the County Secretary. Personally, I was much pleased with the work of the society and feel that the physicians of Aroostook County are to be congratulated on the program presented, occupying one full, interesting and instructive day.

The Penobscot County Association holds monthly meetings, from October to May, inclusive. I have had the opportunity of being present at every meeting for the year, and the attendance has been the best in the history of the Association. Both local and out-of-state speakers have contributed to the varied medical topics.

I expect to be present at the next meeting of the Piscataquis County Society, which is to be held in May.

During the year we have tried to keep in close touch with all the county officers, particularly as to increasing the membership to as nearly one hundred per cent. as possible. A careful review of the situation in this district shows that nearly all active and desirable registered physicians are members of the county societies. Those who are not members have been urged to join, both for their own protection and the good of the society.

Respectfully submitted,

A. K. P. SMITH,
Councilor.

REPORT OF LEGISLATIVE COMMITTEE.

During the last year, medical matters for consideration by your committee have been very little in evidence. For this reason, we have nothing of special interest to report. Looking to the future, we feel that more of our physicians should occupy places in the State Legislature; that this is a duty, which they should not be loath to perform, and we trust that yearly more and more medical men will come forward and help to maintain, in legislative halls, that "balance of opinion" so essential to good government.

Signed: L. P. GERRISH,
W. E. KERSHNER,
J. D. PHILLIPS.

REPORT OF THE COMMITTEE ON VENEREAL DISEASES.

This committee has been seeking to find newer types of literature and the better means of conveying this literature, as an educational measure fostered by the *Maine Medical Association* to the

parents of adolescents in Maine along the lines carried out by Dr. Whittier and his associates of this committee.

Not being satisfied with what we have seen, no work has been done during the present year.

We believe this committee should be continued, supporting the State Department of Health in the educational work of venereal disease control.

The funds on deposit in the Brunswick Savings Institution to the credit of this committee, amounting to \$604.11, have been transferred to the Treasurer of the Maine Medical Association, to be drawn upon as needed for the work of the committee.

GEORGE H. COOMBS,
Chairman.

COMMITTEE ON INSPECTION OF STATE HOSPITALS.

On April 26, 1926, your committee visited the State Hospital at Bangor, and on the 27th, the State Hospital at Augusta. Both Dr. Carl J. Hedin, at Bangor, and Dr. Forrest C. Tyson, at Augusta, showed us every courtesy possible. They gave us access to all the records and statistics for years back, and also showed us all the various departments of the hospitals.

We found both hospitals ably managed, notwithstanding the fact that neither hospital had the number of men on the staff that they require. We found both hospitals scrupulously clean, sanitation excellent, attendants courteous and of a superior type, morale good, food good, well cooked and well served. Patients were clean, well clothed, and in most cases well nourished, and appeared to be in the best of spirits.

The cost per capita at the Bangor

Hospital for the year 1925 was \$6.67 per week and at the Augusta Hospital \$5.09 per week. This fact alone shows excellent management in both hospitals.

Both hospitals are well equipped for treatment—X-ray, hydrotherapy and physiotherapy. A routine examination is made of every patient. At Augusta a Wassermann is done on every patient, and at Bangor when it is deemed necessary.

Both hospitals are crowded. Bangor has a bed capacity of 640, and the number of patients vary from 725 to 775. There were 728 patients at the time of our visit. We found rooms originally intended for one patient containing two, and wards built for six patients containing nine. At the time of our visit, which was in the evening, we found about forty patients sleeping in the corridors and perhaps six empty beds in rooms for emergency cases. At Augusta the total bed capacity is 1,050, while the patients at the time of our visit numbered 1,184. Exactly the same condition exists here as at Bangor, and unless some solution can be devised for the relief of this, there is only one thing which can be done, namely, build a new wing on one or both hospitals.

Your committee has two suggestions which may help a little toward the relief of this condition.

First: Eliminate from all groups the mentally deficient when possible.

Second: Both hospitals show that approximately 16% of the total number of cases admitted belong to the senile group (13.7% senile psychosis, 2.4% arterio-sclerosis). Many are from seventy-five to eighty-five years of age when admitted and die within a very few days or a few weeks after admission. In other words, these old people are

sent to state hospitals to die. Inasmuch as most of this group of cases, which is 16% of the whole, or nearly 300 in the state, are harmless, we would urge the Maine Medical Association to send a letter to physicians and to the various city and town authorities that they make a special effort to care for these cases at home unless conditions are such that this cannot be done.

Some time ago Dr. Tyson and Dr. Hedin sent letters to the officials of the various towns which their hospitals serve, requesting that they withhold all patients possible, because of the crowded conditions, and the result was that for a time the number of these cases was greatly diminished.

In going over the records for the past few years, it is gratifying to note the steady decrease in insanity as the result of syphilis, which reflects great credit on the men in this state for the attention they have given to the diagnosis and treatment of this disease. We recommend greater attempts at diagnosis and a more intensive treatment program, not only at our state institutions, but from every practitioner of medicine in the state. Having this reduction in mind, also the per cent. reduction among the drug addicts since the narcotic law came into effect, and the elimination of a large part of our senile group, we feel as though further additions to our state hospitals might be postponed.

W. N. MILD,

E. M. McCARTY.

REPORT OF THE CANCER COMMITTEE

This has been a very quiet year in cancer activity. After a conference of

the committee at the beginning of the year, it was decided that no new form of activity would be undertaken this year, but that the old and well-tried-out methods of educating the public would be carried on whenever and wherever possible, but with no set campaign in mind. The chairman and other members of the committee have given generous response to calls for cancer talks before lay audiences, and to a limited extent the lectures to nurses in public and private hospitals have been continued. Other activities than these have not been undertaken even by the American Society for Control of Cancer this year, and, as nothing new has presented itself for consideration, we have followed the example of the parent society.

The chairman has now served for five years and considers it proper to tender his resignation at this time. He will not consider serving further in this capacity.

Respectfully submitted,

EDW. H. RISLEY, M. D.,

Chairman.

REPORT OF COMMITTEE ON HEALTH IN SCHOOLS

As chairman of the Committee of Health in Schools, I wish to make the following report:

The sanitary condition of schools in the state as a whole is steadily improving. New buildings are being constantly erected, with sanitary means of ventilation, heating and with modern sanitary plumbing. More and more health in the schools is being emphasized, and through the modern health crusade much is being done in teaching child health chores.

The hot school lunch is a problem which must be studied, but there is no

doubt but what it is a distinct advantage to the child who has to stay in school over the noon hour to have a hot lunch.

More and more milk is being provided for the under-nourished and under-developed child in the school, with decided improvement in the condition of the child.

The problem of the annual physical examination is an important one. The state law requires that an examination of their eyesight and hearing should be made once a year. Of course, this is done for every student in the public schools, but there is need of more extensive examination by competent physicians to detect the pre-tubercular child and other conditions which handicap the child. More school physicians should be appointed to make these annual examinations.

Physical education in the schools is improving the health of the scholars, and as this form of education is expanded in the state, we see an improvement in the physical condition of our students.

I would recommend that the physicians in the State of Maine take more interest in the health of the scholars in our public schools.

I would also recommend that all pre-school children about to enter school have a physical examination before they enter, and defects which are amenable to treatment should be corrected before they enter school. In this way the child would enter school without being handicapped by imperfections.

I would also recommend that more open air schools for the under-nourished and the pre-tubercular child would be of benefit to the communities which they might serve.

C. F. KENDALL,

Chairman.

REPORT OF COMMITTEE ON HOSPITALS

The Committee on Hospitals presents the following report:

No radical changes have taken place in our hospitals during the past year. All are doing good work. Improvements are constantly being made in equipment, laboratories and personnel, which means better treatment of patients and internes better prepared to enter private practise. Three of our hospitals are now on the approval list of the A. M. A. for giving internship.

During the past five years, five hospitals of 100 beds or more, and four hospitals of 50 to 100 beds have been approved by the Hospital Standardization Committee of the American College of Surgeons.

All are having difficulty in making ends meet, and we should strive harder to educate our more prosperous citizens to contribute to them more generously.

H. F. MORIN,
CARL M. ROBINSON,
RALPH W. WAKEFIELD.

REPORT OF COMMITTEE ON PUBLIC RELATIONS

Nothing of importance has been considered by your committee during the year.

C. A. MOULTON, *Chairman*.

REPORT OF COMMITTEE ON MEDICAL EDUCATION

The Committee on Medical Education have no report to offer at this time, having been unable to meet during the past year, and the chairman suggests that it might be possible for this committee to get together at the June meeting at Poland Springs and give a verbal report at that time.

F. H. BADGER, *Chairman*.

REPORT OF THE NECROLOGIST

I regret to announce the deaths of the following members of our Association during the current year:

Albert Martin Card, Head Tide.
Henry Milton Chapman, Bangor.
Adjutor Couturier, Westbrook.
Daniel Driscoll, Portland.
Caleb Joseph Emery, Biddeford.
Henry Austin King, Bangor.
Henry McCollister Moulton, Cumberland Center.

Henry Berthel Peabody, Richmond.
Melville Preble, Portland.
Charles Dennison Smith, Portland.
Harry A. Snow, Milo.
Philip Henry Sheridan Vaughan, Yarmouthville and Portland.
Albion Gustavus Young, Augusta.

Brief notices of most of these members have already appeared in the JOURNAL and others will follow in due season. I have in every instance done my best to obtain a speaking likeness of all of these members, because such half-tones add to the personal descriptions and life history of the members themselves, as well as the medical history of Maine. Now and then it has been impossible to find any photograph, and the only resort has been to obtain enlargements from medical groups. Year after year I exert myself to the utmost to obtain useful information concerning departing members and am now planning a card index of the graduating theses of all who have been graduated at the Bowdoin Medical School from origin to its close. Once completed, this will aid future necrologists, for it is interesting, biographically, to note if the bent of the student's mind in the school continues to influence his life as a practitioner of medicine.

J. A. SPALDING.

JOURNAL OF THE MAINE MEDICAL ASSOCIATION

Dr. Frank Y. Gilbert, 148 Park St., Portland, Editor-in-Chief

Dr. James A. Spalding, Portland, Necrologist

Dr. Bertram L. Bryant, Bangor, Secretary Maine Medical Association

Dr. Stanley P. Warren, Portland, Chairman, Board of Councilors

Dr. Clarence Kendall, Augusta, State Commissioner of Health

Dr. C. A. Moulton, Hartland, Chairman Committee on Public Relations

Dr. E. H. Risley, Waterville, Chairman Cancer Committee

Dr. Thomas A. Foster, Portland, Chairman Scientific Committee

EDITORIAL COMMENT

Committee Reports

This issue is given over to the reports of all the active committees, so as to save the time in the meeting of the House of Delegates. Every delegate should carefully read these reports, as he will be expected to vote on the various questions with only a brief summary by the various chairmen.

It is equally important for all members to read and discuss these matters with their delegate, so that he may come to the meeting fully instructed.

Those matters receiving special mention in the Secretary's report, which were referred back to the county societies from the Bar Harbor session, will come up for definite action at the Poland Spring meeting, and the county delegates should be properly instructed as to how the county stands on these questions.

The House of Delegates is made up of representatives of the county societies, and unless the county units carefully consider and act in matters of interest to the profession in their county and state, and properly instruct their delegates, they cannot properly repre-

sent their units in the House, and furthermore the county units so functioning have only a remote idea of the work going on over the state, or what the State Association is endeavoring to do along various lines.

Very little can be accomplished in unfair criticism, whereas a great deal can be done through carefully constructed criticism.

Read these reports carefully and discuss them in your meetings or with your delegates.

The State Meeting

There is every indication that the meeting at Poland Spring will be an enthusiastic and well attended meeting.

The Androscoggin County Medical Society assures us that there will be a variety of entertainment for the members and visiting ladies, while careful survey of the program will convince one of the value of the meeting from a medical point of view.

We will be favored by representatives from the American Medical Association as well as the New England States.

Better make this your vacation date

and spend at least one day at this famous resort.

Worse and More of It

To the Editor:

Under the date of April 24th, at the instance of the Secretary of the Treasury, there was introduced a bill, S. 4085, to "strengthen the Harrison Narcotic Act." A complete résumé of the same appears in the issue of the *Journal of the A. M. A.* of May 8th. For some reason, presumably known to him, the Secretary of the Treasury has really introduced a bill that gives his office direct and positive control of the practice of medicine in the various states. Of course he only asks for regulations covering the use of narcotic drugs, but if he can obtain control of opium is it unreasonable that he could not go further. Pass this bill, as it is drawn, and every practitioner of medicine is at the

mercy of the office of this high government official. Commit a slight infraction, or *what he or his office considers an infraction* of the rules, and it will be, pay what he may ask or have your registration permit revoked. To fight a successful issue with the government requires time and money; beyond the ability of the average practitioner, to say nothing of his inclinations.

This bill should be brought up for open discussion before the June meeting of the Maine Medical Association. It is not a harmless bit of authority asked by a government official; it is a very wide wedge that the government would put in to govern the practice of medicine. They control it now as regards alcohol, but demand further powers as regards the uses of narcotic drugs. What next?

F. H. JACKSON,
Houlton, Me.

COUNTY NEWS AND NOTES

Cumberland County

On March 29, 1926, Dr. Daniel Driscoll died of angina pectoris at Jacksonville, Florida. He was a valued member of our Cumberland County Medical Association. Therefore be it

Resolved, That while we bow to nature's inexorable law, we nevertheless grieve that our colleague has been called so soon, and that we shall have his wise counsel and genial companionship no more. He was a faithful physician, loyal friend, unobtrusive, and without guile. His character and disposition endeared him to us, his associates, and

we can, therefore, sympathize sincerely with his family and friends in their bereavement.

HERBERT F. TWITCHELL,
N. M. MARSHALL,
STANLEY P. WARREN.

Kennebec County Medical Association

The quarterly meeting of the Kennebec County Medical Association was held Thursday evening, April 29, 1926, at the Elmwood Hotel, Waterville, Me.

Dinner was served at 6.30 P. M., followed by a business meeting, which was

presided over by Dr. George R. Campbell, President.

The minutes of the last meeting were read and approved.

The addresses of the evening were delivered by Walter C. Nelson, Ph. D., Director of the State Laboratory, who spoke on "Some Laboratory Limitations and their Effect upon the Interpretation of Laboratory Results," and by Walter E. Tobie, M. D., of Portland, who spoke on "Gall Bladder Surgery." Both of these papers were very instructive and were followed by general discussion by the members.

The members and guests present were: E. W. Boyer, F. L. Thayer, B. P. Hurd, J. P. Goodrich, R. L. Reynolds, E. E. Wheeler, M. M. Small, H. L. Hill, F. T. Hill, H. L. Parizo, E. P. Fish, H. W. Abbott, L. G. Bunker, P. S. Merrill, V. C. Totman, J. A. Breard, B. O. Goodrich, Alfred Johnson, D. M. D., J. G. Towne and M. S. Goodrich, all of Waterville; F. R. Carter, W. C. Nelson, R. H. Stubbs, G. R. Campbell, B. B. Santosky, O. C. Davies and V. L. Lathbury, all of Augusta; Walter E. Tobie, of Portland; W. W. Hendee, of Vassalboro; Don S. Knowlton, of Winthrop; F. E. Stront, of Gardiner; H. L. Johnson, of Hadley, Mass.

Respectfully submitted,

FRED. R. CARTER, M. D.,

Secretary.

Penobscot County Medical Society

Tuesday evening, April 20, 1926, the Penobscot County Medical Society held its regular meeting at the Bangor House.

Dr. G. E. Young, Skowhegan, Maine, gave an interesting paper on "Lung Surgery."

Benj. Berkwitz, M. D., voted to membership.

Business meeting at 7.30; dinner at 8.00.

The following were present: Drs. G. E. Youngs, Skowhegan, Luther S. Mason, A. W. Fellows, H. D. McNeil, L. S. Merrill, E. S. Merrill, E. E. Brown, J. F. Cox, H. L. Hunt, C. M. Thomas, Brewer, J. L. Johnson, S. N. Marsh, West Enfield, M. C. Madden, Old Town, F. D. Weymouth, Brewer, M. C. Moulton, H. W. Johnson, W. E. Fellows, J. A. Lethiecq, Brewer, C. J. Hedlin, F. B. Ames, W. C. Hall, Orono, H. J. Milliken, H. E. Thompson, J. R. Varney, Old Town, C. J. O'Brien, L. H. Ford, J. P. Russell, So. Brewer, E. L. Herlihy, L. H. Smith, Winterport, H. C. Knowlton, Hampden, A. K. P. Smith, J. F. Starrett, H. W. Sampson, A. H. Schriver.

PROGRAM OF MEETING OF THE MAINE MEDICAL ASSOCIATION

At Poland Springs, June 10th, 11th, 12th

THURSDAY, JUNE 10TH

7.30 P. M. House of Delegates meeting.

FRIDAY, JUNE 11TH

9.30 A. M. Prayer.

Address of Welcome,

by Robert J. Wiseman, M. D.
Mayor of Lewiston

Papers:

1. "Radiotherapy of Cancer of the Uterine Cervix,"

by Dr. Muir, New York, N. Y.

2. "Blood Counts in Diagnosis,"

by John Hewatt, M. D., Lewiston, Me.
Pathologist Central Maine General Hospital

(Paper to be discussed by H. E. Thompson, M.D., Pathologist
at the Eastern Maine General Hospital, Bangor, Maine, and
by Mortimer Warren, M. D., Pathologist at the Maine
General Hospital, Portland, Me.)

12.00 M. Recess.

1.30 P. M. 1. President's Address,

by J. D. Phillips, M. D., Southwest Harbor, Me.

2. Visiting Delegates.

3. Report of Four Cases of Meningeal and Cerebral Complications of Otic Origin,

by A. L. Grant, Jr., M. D., Auburn, Me.

4. "Surgical versus Medical Treatment of Gall Bladder Diseases."

by John B. Deaver, M. D., Philadelphia, Pa.

7.00 P. M. Banquet.

Address,

by Wendell C. Phillips, M. D., New York, N. Y.
President of the American Medical Association

SATURDAY, JUNE 12TH

9.00 A. M. Symposium on Obstetrics.

1. "Secondary Factors in the Production of Uterine Sepsis,"

by Leonard H. Ford, M. D., Bangor, Me.

2. "Indications for Abdominal Cesarean Section."

by H. W. Garcelon, M. D., Auburn, Me.

3. "Treatment of Toxemia of Pregnancy,"

by Adam P. Leighton, Jr., M. D., Portland, Me.

4. "Diagnosis and Treatment of Placenta Previa,"

by R. L. Reynolds, M. D., Waterville, Me.

5. "Indications and Technique of Forceps Operating and Indications and Technique of Internal Podalic Version,"

by Foster S. Kellogg, M. D., Boston, Mass.

(Opportunity for general discussion at end of each paper.

Dr. Kellogg, of Boston, will handle this symposium.)

12.00 M. Recess.

- 1.30 P. M. 1. "The Accessory Sinuses of the Nose" (accompanied by lantern slides). by George O. Cummings, M. D., Portland, Me.

2. "Treatment of Some of the Commoner Fractures,"

by Frederick J. Tees, M. D., Montreal, P. Q.

Report of Committee on Necrology,

by J. A. Spalding, M. D., Portland, Me.

Report of House of Delegates.

Report of Council.

Election of President.



NECROLOGY

Henry Austin Snow, Milo

1879-1926

Dr. Snow, a well-known practitioner of Piscataquis County, saw patients on Saturday, April 10th, of this year, although during the last ten days of his life he had been apparently failing in health, but he died early Sunday morning, the 11th. He came from a generation of doctors, his grandfather being Edward Payson Snow, of Atkinson, and his father also of the same name, who was a medical graduate at Bowdoin in 1849 and practiced fifty-one years in his native town. It is interesting also to note that the first Dr. Snow was an excellent judge of probate for the county in which he lived, an historical fact worth recording, to show the public offices which country practitioners used to occupy to the satisfaction of all the people.

Dr. Henry Snow was born in Atkinson, June 18, 1866, attended one course of lectures at Bowdoin in 1889-90 and and then was graduated medically at the Baltimore Medical School in 1893.

A medical vacancy occurred in Milo at precisely this time. Dr. Snow filled in the place at once, and soon had a large practice in the village and surrounding country. He married Miss Mary Davis, who died some seven years ago. He took a great interest in the schools of the town: was a Democrat all of his life, and for that reason only never succeeded in obtaining a political office in that region, which was wholly Republican. He was much interested in children—having none of his own—and in the schools; was generous to growing-up people, helping them to an education; was town moderator at many town meetings: loved a good fast horse, and was a man fond of hunting, fishing and all athletic sports. He also served as pension examiner for some years, read a great many medical books to keep posted with advances in his business, was occupied in later years with many financial trusts, and truly it may be said that he leaves a very handsome reputation as a physician and as a man.

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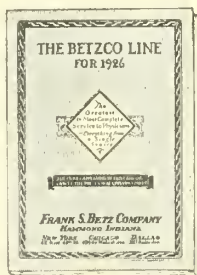
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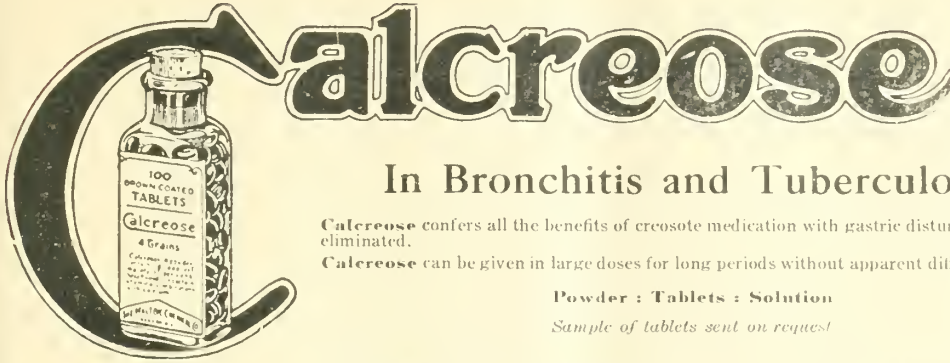
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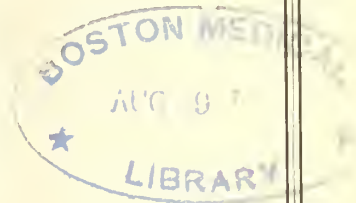
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THE JOURNAL

OF



THE



Maine Medical Association

The Official Organ of the State and County Medical Societies

VOL. XVII, No. 6

JUNE, 1926

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2	3 to 4.....	7
3	4 to 5.....	7
4	5 to 6.....	6
5	5 to 7.....	5
6 to 9.....	6 to 8.....	5
9 to 12.....	7 to 9.....	5

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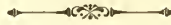
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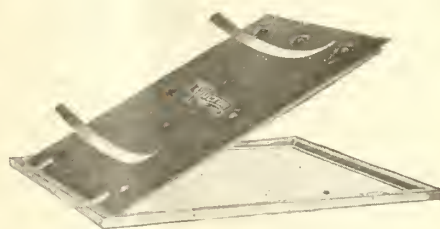
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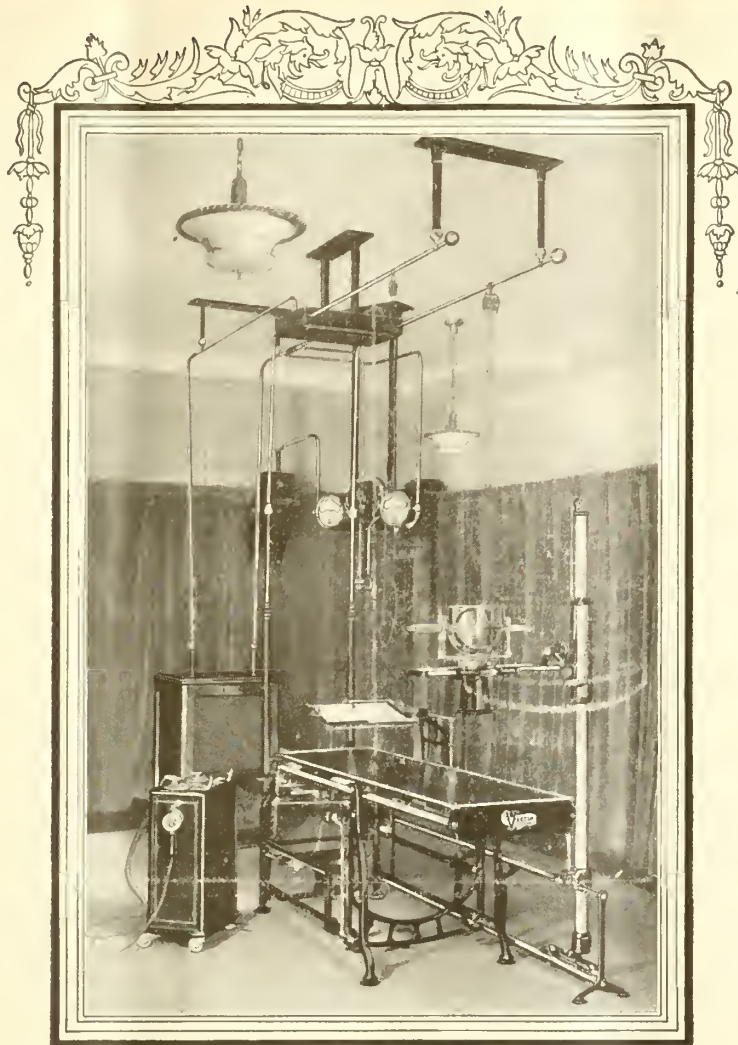
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No. 6

*REGULAR HEALTH EXAMINATIONS

By E. H. BENNETT, of Lubec

Mr. President and Members:

I wish to bring to your attention this afternoon a subject which, to my mind, is quite as important as the consideration of any specified disease.

In connection with the study and practice of medicine, there are many subdivisions, many side issues, many small streams leading into the main river. We cannot get a correct idea of any disease by considering only present findings, and neglecting what has preceded. What might be called *ancient* history of disease is a very important factor. There are many links in the medical chain, but the chain itself is only as strong as its weakest link, and some of the links may begin to rust early.

We are hearing more and more about the advantages of regular periodic examinations. In fact, at the last session of the Maine Medical Association, the

House of Delegates considered what would be the proper fee for such an examination. The fee should depend upon the character of the service rendered and not on a flat rate.

So far as I know, the Metropolitan Life Insurance Company and the Life Extension Bureau of New York have done most along these lines, and their figures show conclusively that such examinations are economical, life-saving and justifiable. The last report of the Metropolitan to which I have had access stated that 190,000 of their policyholders were having the regular yearly examinations, at a cost to the company of over \$1,000,000, yet this showed a saving to the company of 24 per cent. Any of you would let money at that rate of interest, unless you had it all in foxes. Please remember that the commercial saving does not represent the full benefit resulting from these exam-

*Read at a meeting of the Washington County Medical Society.

inations by any means. With these concessions accepted, it may be well to inquire when these examinations should begin, *i. e.*, at what age? Is there any period of life exempt from disease? Certainly not. Then the correct answer to the question would be *at birth*.

We all know that reorganization, or blazing a new trail, is a plant of slow growth. If anyone is in doubt about this, let him study the progress, if progress there is (?), in prohibition enforcement, and decide whether it is easy to leave old, well-beaten paths, and follow quietly, peaceably the new trail. So it will require time and much patient, earnest work on the part of those interested and responsible to get the public at large to adopt the plan of regular, periodic, thoroughly conducted, physical examinations. In all probability it will require legislation, both state and federal, to bring the plan into general use, but, like the "Cooper project," it will eventually win and be accepted the country over. This is simply a demonstration of a plain truth.

It will be necessary to approach this question from a conservative standpoint or fail in the attempt. Can there be any logical reason for delaying these examinations later than the accepted school age in this state, *viz.*, 5 years, when the child passes partially under the care and supervision of the city or town.

In the words of Dr. Wm. H. Allen, "When a state, for its own protection, compels a child to go to school, it pledges itself not to injure itself by injuring the child. We are beginning to

find out that many of our backward pupils are backward purely and simply because, through physical defects, they are unable to handle the work of the school program." The fact that many countries have long since adopted the system of physical examinations for school children is further proof of its worth: France, as far back as 1833; Germany, 1867; Belgium, 1874; Hungary, 1887; Norway, 1899; Sweden, 1863; Roumania, 1899; Moscow, 1888; England, nation wide since 1908; Chili, 1888; Japan, 1898; in the United States — Boston, 1894; New York, 1892; Chicago, 1895; even in Cairo, Egypt, a school physician has been employed since 1882 at a salary of 12,000 francs (\$2,280.00), in charge of 5,000 pupils. In all of these countries the examinations have been found both economical and practical.

The most important question in reference to this plan would be, how and by whom should the examinations be made? The Life Extension Bureau and the Metropolitan Life Insurance Company have their examinations made by especially qualified physicians, of whom they have more than 8,000 in the United States and Canada. Looking at the tongue and feeling the pulse will not do. A certified blank, somewhat similar to those used by life insurance companies, must be accurately filled out and forms one page in the physical examination book. Every additional examination adds another page. This would give you a complete record of the child's physical condition from the time he enters school, which would

be quite as important as his scholastic standing, as now kept. The blanks adopted for these examinations should be made out with the greatest care, and every means known to scientific medicine used to determine the true condition of the child. If the position of examiner should be knocked off to the lowest bidder, it better not be undertaken. Every examiner should qualify before an Examining Board, appointed for that purpose, before he should be allowed to begin his work.

How could such a plan be carried out? By dividing the state into School Examination Districts, each district to contain enough school children to keep the physician busy for ten or eleven months of the year. Make him a public official, give him a reasonable salary, keep him on the job so long as he does efficient work. Every child should have the Dick, Schick, and Wassermann test, and all the new tests as they come along. Much time could be saved by having an assistant do the writing as the physician dictated. The conduct of medical inspection is such a technical matter, and is so different from the work done by the practicing physician, as to demand special training and experience.

Someone may ask, why all this fuss when we already have a medical examination act? At the present time, medical examination of school children is optional and might as well be off the Statute Books.

"SEC. 40. School Physician's Appointment. 1909, c. 73, § 1.

"The superintending school commit-

tee of every city and town shall appoint one or more school physicians and shall assign one to the medical inspection of not over one thousand pupils of the public schools within its city or town, and shall provide them with all the proper facilities for the performance of their duties as hereinafter prescribed: provided, however, that the said committee has been so authorized by a vote of the town at a regular town meeting or at a special town meeting called for that purpose."

"SEC. 41. Duties of Physicians. 1909, c. 73, § 2.

"Every school physician shall make a prompt examination and diagnosis of all children referred to him as hereinafter provided."

Such examinations would apply only to acute conditions, which might be a menace to other pupils.

I fail to see how any act could possibly be more inert than this. The idea of a thorough physical examination never entered the mind of the person who drew it.

Our experience with it was that the town voted to raise \$50.00 and this they refused to pay because of some technicality, so nothing was done. If physicians will get busy, advocate some such plan, work for it in season and out of season, in public legislative halls, on the street and in the social circle, it can be secured and would prove a blessing, the extent and value of which could not be estimated in dollars and cents.

I solicit approval or disapproval of my suggestions. I shall not be offended by adverse criticism. I only ask for the plan that will give the best prac-

tical results. One essential is surely necessary, viz., that it be absolutely and everlastingly divorced from any political taint.

I trust those of our members who are

seeking political honors in the next Legislature will interest themselves in the right plan. We surely ought to have a compulsory, instead of an optional act, at least.

*PRACTICAL POINTS IN THE TREATMENT OF DIABETES.

By ROGER E. BOUSFIELD, Bangor, Me.

Mr. Chairman, Members of the Penobscot Medical Association :

Many qualms have come over me for my audacity in consenting to speak to you to-night. Non-medical, myself, my only excuse for agreeing to appear before you learned gentlemen is that diabetes, perhaps, has concerned me more vitally than any of you. I may not be right in many of my conclusions; I hope you will tell me so. I also trust you will, in a discussion when I yield the floor, bring up ideas of your own. If there are any questions, it is possible that answers may be found. Purposely I shall omit some points that might prove practical; one could talk for hours. I speak from the standpoint of a patient who has tried to observe.

Diabetes is perhaps as old as the human race, but its successful treatment is the newest of the great medical advances. Undernutrition prolonged many lives, but insulin has made all liveable. Diabetes is a disease in which the impairment of islet tissue is so great that a normal quantity of carbohydrate cannot be utilized. Other glands and tissues may be involved, but the symptom-

complex that we know as diabetes is characterized by both qualitative and quantitative loss of islands. Diabetes is insular pancreatitis; insulin, properly used, makes a well person out of an invalid.

Diabetes is a preventable disease in which there is a definite hereditary tendency. Twenty-two per cent. of your cases show a family history. Mild diabetes and potential diabetes have no marked physical symptoms. I would urge you to keep watch of the near blood relations of your diabetic patients: you may prevent disaster.

Ninety per cent. of the diabetics are overweight at the time of onset, or before. Propaganda for the prevention of obesity may be preventative for diabetes, yet the possible evils of undernutrition may be so great as to outweigh any good done. The very fattest seldom get diabetes, but should reduce for other reasons.

Hyperglycemia is a characteristic of diabetes. It is well to remember this, for it may be easy to handicap a non-diabetic with diabetic treatment. Before instituting a final method of diet

*Read before the Penobscot County Medical Association.

in a suspected mild case, one should exclude the possibility of renal glycosuria and of false reactions for sugar in the urine by means of blood sugar tests, and sugar tolerance tests, if necessary.

Diabetes is a disease of metabolism. It affects the utilization of food substances, not only as to kind, but as to practical rate. The diabetic has suffered not merely from foregoing the pleasures of the appetite, but from loss of "pep" and enduring stamina; he has been hypersusceptible to infection, and many of the little aches and pains that are the excuse for a medical vocation.

Diabetes is a disease of nutrition. A person may be overweight, yet undernourished. Usually, if the diabetic lacks "pep," he is utilizing too little carbohydrate; the dynamic food for him has been cut too low; it may be from either decreased intake, or excessive output of sugar. Poor muscle development, a morbid, gnawing hunger, these are the signs. If a radical program of undernutrition, or carbohydrate starvation is persisted in, your man will cut loose and set sail for "sweet Galilee"; either he will do that, or he will half-live a lingering life. Insulin will make him well. Adequately nourish your patients. If necessary, cut down the fat in the diet, cut down the body weight, but give all the starches and sugars consistent with safety.

Why not prescribe a carbohydrate-free diet? The Eskimos live on such a diet, why not diabetics? Well, diabetics are not Eskimos. Even a normal man of the temperate climates would tire of

such food; what can you expect of one who is not well? Such a diet, calculated to allow a normal practical rate of metabolism and body weight, also makes it harder to control glycemia and glycosuria. In addition, too, it brings extra burdens for the liver and kidneys, which civilized man is seldom fitted to bear.

To some the advent of insulin has been the signal for cake-eating. It is true that some diabetics have abandoned all rules of sensible diet and inject insulin in large enough doses to utilize a part of the food. Here the questionable practice of undernutrition is eliminated, only to welcome the evils of constant glycosuria and hyperglycemia. Can the kidneys long endure the passing through of barrels of sugar? Indeed, coma, itself, is partially a result of kidney failure. High blood sugar? The more persistently higher the blood sugar, the sooner the death.

What of the patient who will not diet? Is it best to withhold insulin? Or, if not, what of the mental effect on other diabetics of one who apparently innocuously has been able to abandon diet? While one cannot recommend enough insulin to take care of all the sugar ingested, certainly some insulin, perhaps selfishly, will prolong life and seem to make it more pleasurable. If this course is taken, it is, at all events, better for the patient that he live constantly in agreement with his own wishes than that he diet in periods and feast at other times, for a larger dose of insulin may be more safely prescribed. "How much insulin does it take to eat

a piece of cake?" That is an individual question, and the doctor may be justified in not trying to find out.

What are the objections to giving a mild diabetic some insulin? Fear of hypoglycemic reaction? Educate him; if necessary, have him undergo a reaction under your supervision. Protein sensitization? Do we object to giving prophylactic tetanus antitoxin on the same ground? Need we fear anaphylaxis in one patient from a pin-point of protein, yet not in another from a whole bucketful?

How much carbohydrate? All that is consistent with safety in insulin dosage. I would suggest as a minimum one and a half grams per kilo body weight per day.

How much insulin? All that the patient can safely and beneficially use. Consider me an upstart, if you will, but the results justify the means. For a diebetically well educated, intelligent adult with severe diabetes I should say that one and a half units per kilo body weight is within the safety limit. That is far beyond the sanction of most doctors, but I am convinced that it is not only safe, but imperative; most patients will not require as much insulin as that.

What is the effect of prolonged dosage of insulin? For myself, I have derived nothing but benefit. I had rather live one year with it than a hundred without it; and there are hundreds of the same opinion as I. Diabetes is insular pancreatitis; insulin, properly used, makes a well person out of an invalid.

What of the risk to the physician?

If the patient dies in diabetic coma, the blame rightfully may be placed on the patient, while if he dies in insulin coma, the blame, in part, reverts to the physician. Undeniably it is hard to teach some people the principles of treatment. For those whom you cannot instruct there is but one course — insulin restricted to a safe minimum.

Educate the patient. Spare no pains, for it is only when he knows the how, and a little of the why, that full co-operation is possible. Give him a handbook, make him keep a notebook, insist that he study; teach him what foods, the composition of all foods that he may eat, and what amounts; how to test his urine, and keep it sugar-free; how to inject the insulin, and what amounts to inject; how to recognize the symptoms of a hypoglycemic reaction, and what to do when one is suspected; how to keep free from other complications, and what to do in case of them. Most patients will not need to weigh their food. Not one taking insulin should be without some form of available glucose in his pocket, some fruit, a lump of sugar, or perhaps a flask of syrup. "For his own particular case, the patient should be his physician's chief assistant; he should never attempt to be his own physician."

Hypoglycemia. Most reactions are preventable if the insulin is given at the proper time before meals. If this condition is fulfilled, the reaction occurs commonly between two and four hours after the meal. All severe reactions are preventable if the patient will make weekly tolerance tests to detect any alteration in the diet that may

be advisable, and act accordingly. The effect of exercise should also be noted. The speed in development of the reaction varies with the excess insulin, whether gross or slight. In fact, the speed of development may be so great that the beginning symptoms may not be recognized as such; usually, however, the symptoms are marked, and unconsciousness can always be averted by eating the always-present lump of sugar. If the patient has reached the unconscious state, sugar, and, if necessary, adrenalin will save the patient quickly. There is no apparent ill effect from hypoglycemic reactions which have not been allowed to proceed to the end. When once attained, the coma is far easier to treat than diabetic coma, or practically any other complication that results from too little insulin. It may be differentiated easily from diabetic coma, for we have deep breathing, full pulse, profuse sweating, and entire absence of acetone odor, a sharp contrast to the corresponding terminal diabetic condition—shallow breathing, weak pulse, profound dehydration, sometimes marked odor of acetone.

Generally speaking, children are more unstable toward insulin than adults; larger and fewer doses may be given to the latter. For example, twenty units per day might well be given to the adult in one injection, while for the child several injections are necessary in giving the same amount per day. Unit for unit insulin goes farther in the child and in the mild diabetic; among these individuals each unit takes care

of more sugar. There is also a permanently beneficial effect of insulin in the increasing tolerance, especially in the mild case and in the child; insulin, properly used, tends to make a well person out of an invalid.

Coma. Points in resuscitating the patient are: Insulin dosage, controlled by urine analyses, or blood sugar tests, or both whenever possible and necessary; restoring the water content of the body; glucose, if advisable; sustaining the circulation (caffeine and digitalis are the most commonly and successfully used drugs); keeping the patient warm; opening the bowels, and sometimes gastric lavage.

More than half the diabetic deaths are due to infection. Most people have an inadequate idea of personal hygiene. Such simple matters as proper clothing, keeping the body clean inside and out, adequate habits of rest, and avoidance of physical and nervous strain can be tactfully and beneficially taught.

The patient should undergo some physical redevelopment. Too much exertion makes him hungry and uses up too many calories; too little decreases his tolerance and makes him flabby. It is wrong to keep the patient in bed, yet equally wrong to advise strenuous physical effort.

To sum up: Prevent diabetes where you can. Make sure your man has diabetes before you permanently prescribe. Aim at normal practical rate of metabolism. Amply nourish. Educate the diabetic. Give him all the insulin he needs. Protect him from the dangers of unhygienic living.

Bring back his physical vigor. So shall you prolong his life and make possible its continued usefulness and happiness.

DISCUSSION.

The following are some of the questions proposed by physicians present and answers offered by the author in the discussion following the reading of his paper:

Does insulin affect the kidneys?

Whether insulin may or may not induce Bright's Disease, or help to induce it, is to my mind a moot question. Before the days of insulin there were certainly some patients who developed symptoms of renal disease following desugarization; the condition may have been there all the while, yet was masked on account of a preponderance of diabetic symptoms. Personally I do not think that insulin causes nephritis.

In what way does insulin act on the body?

It enables the body both to store sugar and to burn sugar.

Describe the symptoms of hypoglycemia.

The symptoms may vary with different people, and with the same person at different times. First, there is usually a light-headed feeling, and a tingling sensation of the tongue; also there may be hunger, or a temporary astigmatism. This is followed by a feeling of tremor without the actual tremulousness; one feels like quivering, yet controls himself from quivering. Sweating may come on at the same time. It is succeeded by rapid breathing, unconsciousness, convulsions

and death, unless arrested. After one has had a few of the symptoms he never forgets them. There is no pain.

If you could not adequately explain to the patient the symptoms of hypoglycemia, what would you do?

I would have him undergo a reaction under my supervision.

Is insulin habit-forming?

Not in the sense that opiates are. The patient is only too glad to leave out his needle thrusts.

Can the patient undergo more improvement by diet alone, or by addition of insulin and corresponding increase of diet?

I believe that the addition of insulin would help more in the permanent improvement of tolerance.

Do you consider it worth while to give the child a larger dose of insulin provided you can make it safe by more constantly watching him?

I do; the more insulin safely used, the more the permanent improvement.

There have been some cases of passage from diabetic coma to insulin coma; how would you prevent that?

There is usually a period of consciousness between the comas; one should watch for that. Glucose should be fed or injected in a doubtful case. Blood sugar tests help.

Is there always depression with glycosuria?

I think so, if the condition is continued long enough. Even renal cases may develop a marked depression, which clears up on treatment.

Describe what you would do in treating a case of diabetic coma.

I would, first, get the patient into a bed filled with hot water bottles. Next, I would inject a dose of between forty and sixty units of insulin, according to the exigencies of the case, part or all of which intravenously. If the patient were constipated, I should employ an enema, and perhaps wash out the stomach; I should use every possible means to open up and clean out the bowels. I should force hot fluids, some of which as hot coffee, or infusions of digitalis. If the patient cannot take fluids by mouth, I would give them intravenously, or subpectorally, or by both routes—normal saline, or both saline and ten per cent. glucose, and some caffein prepared for subcutaneous use. At this time I should make a urine analysis, and if possible a blood sugar determination. Three hours later I would test the urine again, and if urgent do another blood sugar, followed by more insulin subcutaneously or intravenously, the size of the dose and the route varying as to the amount of improvement. After this I would continue insulin and other medication as often as needed. If possible, I would be in continuous attendance on the patient until he had regained consciousness.

Is it better to give glucose, or orange juice if the patient cannot take fluids by mouth?

Emphatically I should say that orange juice would be preferred; it will stay on the stomach better, and will gradually supply the alkalies that the body has lost.

Would you give sodium bicarbonate intravenously?

I would not. For most patients it leads to further unpleasant symptoms, and even may kill the patient when he has some chance of living. Probably acetone bodies are rapidly released from the tissues and thrown into the blood, only to augment the excess already there.

What causes diabetic coma?

Diabetic coma is essentially an acidosis from the acetone bodies. It results mainly from incomplete combustion of fats. "Fats burn completely only in the flame of carbohydrates"; if there is not enough internal secretion of the pancreas to allow the burning of sufficient carbohydrate, acidosis begins, and increases as the pancreas fails. The cause of coma is further complicated in matters of kidney secretion and high blood fat.

I have seen advertised certain pocket sets of apparatus for the determination of blood sugars; what is your opinion of their value?

Probably all of them might be successfully used by the practitioner. One based on the Folin-Wu method would be preferred, as it takes least time and is subject to least error.

How can you distinguish between diabetes and renal glycosuria?

The only reliable way that I know of is by a blood sugar determination. Mild diabetes and renal glycosuria give rise to the same physical symptoms, and nearly the same rate of cessation of glycosuria by diet. Some cases of

diabetes have a renal complication in a low threshold. For different people the threshold of kidney permeability for sugar may vary from one-tenth per cent. in the blood to four-tenths per cent., or even higher.

What are the "false reactions for sugar in the urine" that you spoke of?

Reactions due to pentoses, and the administration of salicylic acid and its related compounds are the commonest.

How would you treat a case with a persistently high renal threshold?

That would be difficult to do very successfully; all one could insist on would be sugar free urine.

How would you conduct an emergency operation on a diabetic?

I would operate at once, and treat the diabetes afterward. I would use local

anesthesia, gas and oxygen, or spinal anesthesia, with as little ether or chloroform as possible.

Why would you not use ether or chloroform?

The diabetic is prone to acidosis; both these anesthetics enhance that condition.

How would you prepare a diabetic for operation if there were plenty of time?

I would prescribe on the day before the operation about a hundred and fifty grams of carbohydrate in the diet, with enough insulin to allow all, or nearly all of it to be utilized; I would also force fluids by mouth.

Can Intarvin supplant insulin?

Reports of the use of Intarvin seem to agree that it may be substituted for insulin in the mild diabetic.

COUNTY NEWS AND NOTES

Androscoggin County Medical Society

The regular meeting of the Androscoggin County Medical Society was held at the Y. M. C. A. Building, Auburn, Me., May 25th, 1926.

The meeting was called to order by Dr. W. W. Bolster, President.

The financial report of the society was read by Dr. L. J. Dumont, Secretary.

Records of previous meeting were not read.

It was voted to suspend rules of application for membership, and that the Secretary cast one ballot, admitting the following physicians as members of the Association: Dr. Geo. A. Schneider, of

Lewiston, Dr. Charles Randlette, of Sabbathus, Dr. Linwood Sweatt, of New Gloucester.

Dr. Lucy O'Connell-Desaulniers' application was voted upon, and she was accepted as a member.

Reports relating to the meeting of the Maine Medical Association, to be held in Poland Spring, were read. These were from different committees. A committee for Entertainment of Ladies at Poland Spring was appointed, consisting of Mrs. E. V. Call, chairman, Mrs. John Sturgis, Mrs. B. W. Russell, Mrs. W. W. Bolster and Mrs. Alton Grant, Jr.

There were present: Drs. W. W. Bol-

ster, W. E. Webber, John Hewat, E. V. Call, W. J. Renwick, S. L. Andrews, E. N. Giguere, E. J. Poulin, E. Leathers, B. G. W. Cushman, H. Garcelon, B. W. Russell, L. P. Gerrish, A. W. Plummer and L. J. Dumont.

L. J. DUMONT, *Secretary*.

Penobscot County Medical Society

The meeting of the Penobscot County Medical Society was held at the Bangor House, Tuesday evening, May 18, 1926, this being the last business session until October 19, 1926.

The "Presentation of Case History," by several physicians, with discussion of same, was most interesting.

The following were present: Luther S. Mason, M. D., L. H. Smith, Winterport, F. B. Ames, G. I. Higgins, Newport, H. C. Knowlton, Hampden, H. W. Sampson, E. R. Bousfield, J. B. Woods, C. J. Hedin, N. R. Cook, Newport, W. E. Fellows, W. C. Hall, J. D. Clement, M. W. Emerson, L. F. Wright, M. C. Madden, Old Town, J. F. Starrett, H. G. McKay, Howland, M. C. Moulton, L. H. Ford, H. C. Scribner, B. L. Bryant, A. W. Fellows, H. E. Thompson, E. S. Merrill, J. B. Thompson, E. L. Herlihy, A. K. P. Smith, H. W. Johnson, J. P. Russell, So. Brewer, Barbara Hunt, H. D. McNeil.

NECROLOGY

Albion Gustavus Young, Aroostook and State Board of Health, 1843-1926

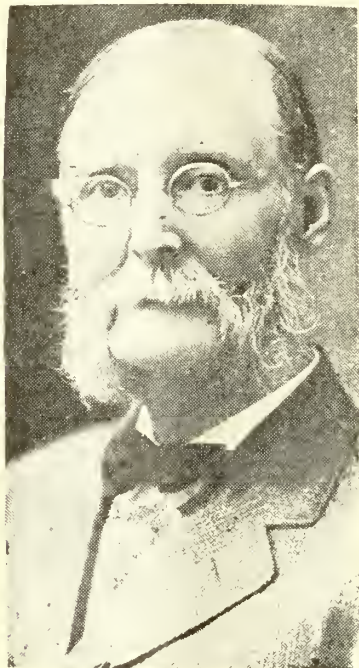
A few months ago we offered a tribute to a public benefactor, the late Dr. Charles Dennison Smith, of Portland, long connected with the Maine General Hospital and the State Board of Health, and now we are recalling the career of Dr. Young, Secretary of the State Board of Health for more than forty years. Under his skillful guidance against epidemics and in spite of many obstacles, he did untold benefit for the public health and to his own personal honor and remembrance.

Born April 6, 1843, at Linneus, the son of Jabez and Nancy Burleigh Young, he was educated at Houlton Academy, and then went on to Bowdoin for his

medical degree in 1869. It was at Brunswick that he met Dr. Frederic Henry Gerrish, who, more than any other, directed his path for life. Dr. Gerrish early observed Young's interest in hygiene and public health, followed his career as a practitioner in various towns in the Aroostook, and it was he who, as President of the State Board of Health, urged Dr. Young to abandon general medicine, and become its permanent Secretary.

Settling in Augusta as Secretary—"for two years only," as he said, at the end of which time he proposed to resign if he failed to find the work congenial—he was confronted almost at once with an epidemic of smallpox on the western frontier of the state and became so deeply interested in the an-

nihilation of that, and in public vaccination, that he went on from one branch to another, and literally died in office on Friday, the 15th of January, 1926, after a brief illness. He would have been eighty-three years of age in the coming April, but almost to the last he continued to work for the people, and had done it, with short vacations only,



DR. ALBION GUSTAVUS YOUNG

once to Europe and to various public health conventions in this country.

Dr. Young was the first to establish a Bureau of Vital Statistics, and to urge proper inspection of rural and city schools, many of which were in those days in a filthy condition. He was persistent before the legislature for compulsory vaccination, and for years he read before the meetings of our Associ-

ation valuable papers on "Water Supply," "Prevalent Diseases," "Infectious Diseases," and so on. In addition to these literary labors, he caused to be issued, frequently, pamphlets on minute points in the search for health and the prevention of disease; and these he spread broadcast throughout the state. It is rare for any physician to do so much good work for others as did our lamented comrade, and it is rarer still that he should have continued his labors so long, to the universal satisfaction of all concerned, or interested.

Dr. Young married, first, in 1871, Miss Helen Mansur Rogers, of Houlton, and she dying, he married, secondly, in 1877, Miss Martha Bray, also of Houlton, and who died before himself. He is survived by a son, who practices medicine away from Maine, and by a daughter, who continues the family characteristic of laboring in the State Board of Health for the benefit of the people at large. The name of Young will long remain high on the rolls of those who have labored loyally and for small rewards for the public health.

J. A. S.

Adjutor Couturier, Westbrook, 1865-1926

Dr. Couturier was born in Murray Bay, Canada, July 11, 1865, the son of a French father, Cyril Couturier, and a Scotch mother, Eleonore Harvey Otis. He attended the Seminary at Chicoutimi, where he won a scholarship, then entered Laval University, Quebec, in 1884, and graduated in medicine and

surgery with high honors, having won a gold medal in 1887. On the 13th of July, directly afterwards, he married Miss Adelina Trembley, of Quebec, of which union fifteen children were born, the widow and eleven children now surviving. Coming soon after this to Westbrook, he practiced there the rest of his life amidst a large clientage of French extraction and also amongst those who were native born. He was city physician for several terms at various intervals, according to the turn of political currents, and during his time of service his results for public health were excellent and praiseworthy. He does not seem to have written any medical papers, but the general impression of his career is that of a well-balanced medical practitioner, surgeon and obstetrician.

RESOLUTIONS ON THE DEATH OF
ADJUTOR COUTOURIER, M.D.,
OF WESTBROOK, MAINE.

WHEREAS, our colleague, Adjutor Coutourier, M. D., of Westbrook, Maine, was suddenly called from his earthly labors to the land of eternal rest on March 31, 1926, and

WHEREAS, Dr. Coutourier was an esteemed member of the medical profession and had been in active practice since 1887, and

WHEREAS, he was a member of the Maine Medical Association, the Cumberland County Medical Society, and the Westbrook Medical Club, of which he was a charter member, and

WHEREAS, by his professional skill, kindly disposition, and courteous and affable manner he endeared himself to

all with whom he came in contact, therefore be it

Resolved, that in the death of Dr. Coutourier the medical profession has lost a worthy member and the community a good citizen. And be it further

Resolved, that in recognition of the unfailing devotion always shown by him to the cause of his profession, we, as his colleagues, cause a copy of these resolutions to be spread upon the records of our society and also a copy be sent to his family with sincerest condolences in this their time of bereavement.

F. L. FERREN, M. D.,

L. L. HILLS, M. D.,

FREDERICK E. WHEET, M. D.,

*Committee Cumberland County
Medical Society.*

**Daniel Driscoll,
Winthrop, Sydney and Portland,
1860-1926**

Dr. Driscoll was born in Winthrop, January 16, 1860, the son of Humphrey and Mary Haggerty Driscoll. He married in that same town Miss Helen Andrews Loring, daughter of Henry Sewell and Abigail Farrington Loring, and from this union was born a daughter, Miss Henrietta, who died not long ago. This sad event affected Dr. Driscoll very visibly to his friends, but he was apparently improved, when, coming home from Florida, he died suddenly from angina pectoris March 29th, 1926.

He graduated from Medical School in 1885, after which he returned to Winthrop, where he practiced for five years, going from there to Sydney, and finally,

in 1897, he settled in Portland, so that at the time of his death he had practiced here nearly thirty years.

Dr. Driscoll was for one year a genial President of the Portland Medical Club, and on one or two occasions wrote brief medical papers.

He is now survived by a widow, and leaves, as a remembrance, the record of a kind and faithful medical adviser and practitioner.

**Albert Martin Card, Head Tide,
1848-1926**

Dr. Card was born in Bowdoinham, March 26, 1848, the son of Joel and Rebecca Adams Hall Card, educated at Kents Hill, then taught school and worked his way through the Bowdoin Medical School, graduating in 1875 with a thesis on "Malarial Fever." He settled in Alna, at Head Tide, April 18, 1876, and was consequently almost fifty years in active practice at the time of his death, March 8th, 1926. During that time he was superintendent of schools,

justice of the peace, trustee of the academy at Newcastle, a director in one or more banks and trust companies, a farmer and a gardener, having a large circle of friends and acquaintances.



ALBERT MARTIN CARD

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Sixty Years in Medical Harness. By Dr. Charles B. Johnson. New York, Medical Life Press. Price, \$3.00.

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the East. His early experience in the army, in the Civil War, and his strivings for practice in the unsettled West have much to interest readers.

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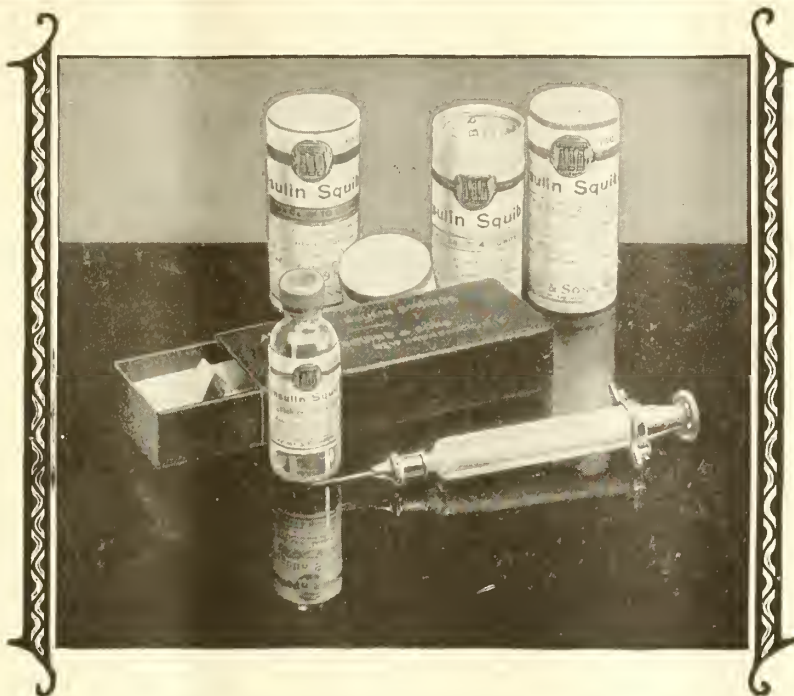
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THE

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The Official Organ of the State and County Medical Societies

VOL. XVII, No. 7

JULY, 1926

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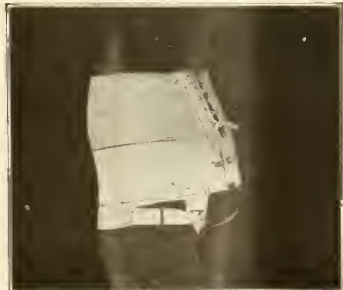
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"THE MEDICAL PROFESSION AND SOCIETY."

In all human endeavors there should be a central idea, a lodestone around which all our endeavors should gravitate. It is that we should have the good of society as the cornerstone of all our strivings in this world. No man can fully complete a well-rounded life, a life which his Maker intended him to live, unless he can come to the realization that upon society rests the future of his own life, as well as the life of the state or the nation to which he belongs. In view of this fact, let us see if the medical profession is not functioning in this respect and can claim to at least equal rank with her sister profession, the law, for the promotion of the welfare of society.

The great philosopher, David Hume, speaking of the law, said: "Man, born of a family, is compelled to maintain society from necessity, from natural inclination and from habit. The same creature, in his further progress, is engaged to establish political society in order to administer justice, without

which there can be no peace among them, nor safety, nor mutual intercourse. We are, therefore, to look upon all the vast apparatus of our government as having ultimately no other object or purpose but the distribution of justice, or, in other words, the support of the judges. Kings and parliaments, fleets and armies, officers of the court and revenue, ambassadors, ministers and privy councillors, are all subordinate in the end to this part of the administration." Truly a noble view of the law. Let us see that medicine, which has as its object the healthy mind in the healthy body, and which devises and executes eugenic and euthenic programs, if directed toward this end, performs a service to society that is equally indispensable—a service indeed which, on due consideration, the very practice of justice itself will be seen to depend.

Medical investigators, says Doctor Barker, in their studies of physical diseases and of abnormal thought, feeling and behavior, have discovered and de-

scribed enormous numbers of physical and mental maladies and irregularities. They have, too, more or less successfully inquired into their causes, and they are ever striving to follow, in series, the links in the chains that connect these causes with those ultimate consequences that we know as signs of structural change and as symptoms of pathological functioning. The causes that they find are sometimes defects in the original make-up of hereditary qualities, sometimes malign influences, physical, chemical, biological or social, in the environment, and more often still a combination of faulty hereditary tendency with environmental injury. And among the consequences of abnormal function, it is always interesting to observe in how far the damage to the individual, and the corresponding hindrance to his welfare, impair also his social usefulness, or, as they do in many instances, make him a social menace.

We know that physical disease involves both personal and public loss. Malaria and yellow fever not only prostrated their victims, but they prevented for a long time the development of Cuba and the building of the Panama Canal.

I had the pleasure of visiting of late these two places, and never before have I seen a greater object lesson of what medical science has done for humanity and how much the people of these two former "pest holes" appreciate what we did for them, and as I sailed through the Panama Canal I never was more proud of my country and the profession to which we have the honor to belong.

Then to the advancement made in other sciences, such as electricity and the vaccines. How vividly I remember how my professor in *materia medica* would enthuse us with his treatment of

Smith's bromide for diphtheria, and so would our professor of medicine tell us, when general peritonitis set in, to give them a hypodermic and let them alone.

All these theories have passed away, and from their ashes have blossomed and grown the greater truths and better results for the benefit of stricken humanity, and who shall say how far yet we shall advance in all lines of research and for the good of humanity!

Yet, in these times of great advancement of human endeavors, there is need of someone to keep his feet on the ground and to guide the people into safe paths. The first of these paths is a healthy mind in a healthy body, which directs the manner of living and exercise of the human family, so that they can exercise all their functions to find adequate expressions for the whole of their personality, to defend the right to be themselves, and also to recognize their obligation, and to refrain from intercourse with the right of others, so in the end there may be fairness for all.

The human side of the life of a physician we too often lose sight of—the good we do and the benefit we are to humanity. Nor should we forget that we are all human; and the one who can feel for another's woes, and the one who at times is able to catch the vision that we are to a great extent our brother's keeper, will go far in extending our usefulness to our patients and the influence the profession has in shaping public opinion for the betterment of the town and state we live in.

Yet there are times in each of our lives when we feel that our labors for humanity are not appreciated by our patients, and we are led to think of the couplet that someone has written,

"God and the Doctor we both adore,
Just on the brink of danger, not before;
The danger past, both are alike requited,
God is forgotten, and the Doctor slighted."

Who, then, has a larger or a more responsible function than he who undertakes, as the physician is now compelled to do, to act as personal counsellor to people in the conduct of their lives? How extensive should be his knowledge and experience! How great should be his power of imagining himself completely in the place of the person he advises—what has been spoken of as the power to creep under man's skin! And with what infinite tact must he be endowed if he is to be able to convince and to persuade! Can there be any doubt of the social significance of the performance of such functions, of the value to society of the performers, if they do their work well? It is upon the general practitioner of medicine, aided by the consultant and the specialist, that the bulk of this work of advising persons of diverse character, and in widely different conditions as to hygienic living,

falls. It is to him that the people turn for counsel, especially when disease exists or threatens, but nowadays more and more also, in order that the bodily health and the capacity to work may be preserved, that mental functions may be exercised freely, and that conduct may be conducive to personal and public welfare.

"Charity," said Doctor Oliver Wendell Holmes, "is the eminent virtue of the medical profession. Show me the garret or the cellar which its messengers do not penetrate; tell me of the pestilence which its heroes have not braved in their errands of mercy; name to me the young practitioner who is not ready to be the servant of servants in the cause of humanity, or the old one whose counsel is not ready for him in his perplexities, and I will expatiate upon the claims of a virtue which I am content to leave you to learn from those who have gone before you, and whose footprints you will find in the path to every haunt of stricken humanity."

*THE TREATMENT OF SUPPURATIVE CONDITIONS OF THE LUNG.

By WYMAN WHITTEMORE, Boston, Mass.

The subject of thoracic surgery is a very large one—one much larger than the general surgeon, who is not particularly interested in it, is apt to think. The drainage of acute empyema, the operations for the closure of chronic empyemas, are only a very small part of the whole subject. This may be readily seen in looking over Lilienthal's recent book on "Thoracic Surgery," which is published in two large volumes, each

of which contains between six and seven hundred pages.

It seemed to me, this evening, that it might be of interest to speak of the treatment of certain of the suppurative conditions of the lung that surgery is trying to benefit and to bring out some of the things that surgeons interested in thoracic surgery are trying to accomplish in the face of many difficulties. It is only during the last fifteen years

* Read before the Kennebec Medical Association.

that there has been any great advance made in the knowledge and treatment of these conditions, so it is easy to see that men working in this field are still to be considered pioneers. It may be, and it probably will be, that ten or fifteen years from now our ideas will have changed radically from those of the present, just as our present beliefs are very different from those of ten or fifteen years ago.

The two subjects that I propose to discuss, very briefly and informally, are the simple lung abscess, that is, of a non-tubercular nature, and bronchiectasis. It is necessary for this purpose to have a clear idea of these two conditions, and this is not easy, at least for me, as I frankly say that it has only been within the last two or three years that what I mean in using these terms has become reasonably clear to me, and I well realize that what I mean in using the term bronchiectasis may be quite different from what someone else may mean in using it. Indeed, the two conditions may overlap one another, and still a third may enter into the picture. By lung abscess, I mean an actual breaking down of a localized area in the parenchyma of the lung and the formation of an abscess surrounded by inflammatory tissue, pneumonitis. This may be a fairly thin wall or a very thick one. X-ray should demonstrate a cavity in this area with a fluid level that shifts with change in position of the patient. It is interesting to see what may happen to this condition if it does not get well by itself and has no treatment. One of the best ways of following this is by X-ray, and it is remarkable to see in the course of a month, or two or three, that what was formerly a single abscess has entirely changed.

The X-ray shadow is merely a dense one, with no central cavity formation, and there may be several small bright areas in this shadow that are probably small abscess cavities. As the condition persists, it is only natural that there should be some dilatation of the bronchial tree leading to this part of the lung, so that there exists a localized bronchiectasis. If the lobe of the lung should be cross-sectioned, it would show some dilation of the bronchioles, with or without pus in them, and many small abscess cavities, some draining and others not. This condition, then, becomes a pyemia of that region of the lung. What at first was a more or less simple abscess has now become a localized pyemia with a localized bronchiectasis. As I shall point out later, what may have been a comparatively simple condition to operate upon has become difficult and an extremely dangerous one to deal with. Of course, all abscesses do not change their characteristics and become another condition as quickly as I have described, but I find that, sooner or later, this will take place if the patient lives, is not operated upon, and does not cure himself. It is well to bear in mind that there are many other complications that may develop as time goes on. Brain abscess is not uncommon, the infection being carried directly through the blood stream. Extension of the infection in the lung, broncho-pneumonia in the same lung or in the opposite side, septicemia, general pyemia, pericarditis, and perforation into pleural cavity are met with. Hemorrhage may take place at any time, this varying in severity from a trivial to a fatal one.

Let us now turn to bronchiectasis. In this condition there is a dilatation

of the bronchial tree. As surgery can only hope to deal with a process localized in one lobe of the lung, the bilateral disease cannot be considered in this paper. The bronchus leading to one lobe of the lung and the bronchioles become dilated. Sooner or later, infection will always take place, so that pools of pus form in these sacculations. Occasionally there will be a very large one, which may contain as much as half a pint of pus. As the dilatation of the bronchus increases, the wall thins out, and the infection may extend into the parenchyma of the lung, so that an abscess or abscesses of the lung will form. These are often called bronchiectatic abscesses. I prefer to call these lung abscesses, as they truly are, and limit the term bronchiectatic abscess to the sacculations formed by dilatation of the bronchus containing pus. When, then, the condition is one in which there are dilatations of the bronchus and bronchioles containing pus and also many large or small abscesses in the pyrenchyma of the lung, there is a suppurative bronchiectasis plus a localized pyemia of the lobe of the lung. When the infection in the lung is very slight, the condition may remain stationary for many years.

Bronchiectasis may be divided into those cases that start in early childhood without any definite etiology and those that are acquired, the latter being due to foreign bodies, including not only foreign substances, such as teeth, beans, etc., but also infected material that lodges in a bronchus. When the dilatation of the bronchus begins in childhood, sooner or later infection will take place. As I have said, this condition may exist for many years. I well remember one case, a man in the late six-

ties, who had had this condition ever since childhood. He was a thin, frail man, who quite naturally had become greatly interested in his condition, so much so that he kept a careful record of the amount of sputum raised each day. He weighed this and found that in the course of a year the sputum raised weighed more than he did. If I remember correctly, he weighed about ninety-five pounds and the sputum weighed several pounds more than this. If the infection works through into the parenchyma of the lung, complications such as I have already mentioned in speaking of lung abscesses may take place, and the span of life is not apt to be as long as it was in this remarkable case just mentioned.

Let us now take up the treatment of these two conditions, considering lung abscess first. This may be divided into four possibilities. Medical, or "expectant" treatment, bronchoscopy, artificial pneumothorax, and operation. All cases should be given the opportunity of being cured by medical treatment before any other is considered. This consists of rest in bed, good food, fresh air, sunshine, and postural drainage. Usually it will be found that there is some position in which the patient can be placed that will cause the abscess to be drained by gravity. This position varies with the position of the abscess, *e.g.*, if the abscess is situated in the lower lobe raising the foot of the bed, so that the patient's head is downhill, will aid in emptying the abscess. Or the patient may be taught to lean over the side of the bed with his head nearly down to the floor, and this will bring about the desired result. Of course this position cannot be kept up for any length of time at first, but gradually the length of time

may be increased, so that this position may be taken and the patient remain in it for some 15 to 30 minutes three or four times a day. Needless to say, co-operation on the patient's part is very necessary for anything to be accomplished with this form of treatment. Just how long medical treatment should be kept up is largely a matter of opinion, depending on each individual case. It is well to bear in mind how many cases may be expected to be cured by this method and how many will die if no treatment is undertaken. In a series of one hundred cases of my own, 11 per cent. recovered spontaneously. Lord ("Diseases of Bronchi, Lungs, and Pleura"), reports a series of two hundred twenty-seven cases taken from the Massachusetts General Hospital and his own practice in which 11 per cent. recovered. The total duration from onset to recovery in these cases was usually within two months. The longest duration was ten months in one case. The fairly mild cases in which septic signs are few or absent, in which the sputum is small in amount (perhaps half an ounce in twenty-four hours), not foul, and in which the process is situated close to the root of the lung are the most favorable ones for this form of treatment. While this treatment is being carried out great care should be taken to check the progress made, or to note the stationary course of the disease or its downward progress. If septic signs increase or the amount of sputum increases, or the foul odor becomes more marked, other methods of treatment must be strongly considered. In continuing medical treatment over a long period of time the dangers of such complications as I have mentioned should be always remembered. Narcotics to con-

trol cough must be used very sparingly. If cough is checked and sputum that should be raised retained, septic signs will increase and the process may extend.

Bronchoscopy in the hands of men especially trained, who are able to do this under local anesthesia, or without any anesthesia in children, may be tried in the very early cases after they have broken into a bronchus. I do not believe this form of treatment should be tried when a general anesthetic must be used. This method consists of the aspiration of the cavity, dilatation of any partial stricture in the bronchus and possibly the lavage of the cavity with some mild solution. Cases in which the abscess cavity is situated close to the root of the lung seem to be the most favorable for this treatment. A few successful cases have been reported. It seems only reasonable to me to expect few cures in those cases in which this treatment has not been instituted for several months after the formation of the abscess.

Artificial pneumothorax, in my opinion, is in about the same status as bronchoscopy. The only hope for this to produce a cure is to bring about a collapse of the lung early, before adhesions have formed. After the lung and the costal pleura become adherent, no good, other than possibly a very temporary one, should be expected. In one quite striking case it did temporary good. A woman entered the hospital in extremely poor condition, far too poor for operation to be considered. She had almost continuous cough, could neither take any nourishment nor obtain any sleep. Injecting a small amount of air into the pleural cavity lessened the cough very much, so that some rest and nourishment

could be taken, although X-ray taken following the pneumothorax showed the lung to be firmly adherent. In any attempted cure by this method the lung must be kept collapsed for a long time, probably several months to a year. Of course there is an occasional "freak" case in any walk of life. Balboni and Churchill (*Boston Medical and Surgical Journal*, January 5, 1924), report a successful case following one injection of air. I well remember this case. A small child had a lung abscess in an upper lobe and was too sick for operation to be considered. The temperature was high and the amount of sputum large. Within twenty-four hours after one injection of air the cough had ceased and the temperature was normal. During her stay in the hospital there was never any more cough or rise in temperature. On leaving, X-ray showed the cavity healed, the lung expanded and she has remained well ever since. Abscesses situated near the root of the lung are the most favorable for this treatment. There are certain dangers that should always be remembered in using this method of treatment. If too much air is injected into the pleural cavity when the lung is adherent to the costal pleura, an adhesion may be stretched so that a tear in the lung will be brought about. If this tear takes place near the region of the abscess an empyema will be produced. In stretching an adhesion, air may enter a blood vessel and an air embolus lodge in the brain.

Abscess situated near the periphery of the lung in which X-ray demonstrates a fluid level is the most favorable one for operation. Drainage of a lung abscess may be a comparatively easy procedure, or, on the other hand, a dif-

ficult and trying one. Local anesthesia should be used when possible. This is always possible when the lung and the costal pleura are adherent unless the patient refuses to allow its use. Seldom can anyone be sure from physical examination whether or not the lung is adherent. If the X-ray shadow extends to the axillary line, for example, and the process has existed for several months, it is justifiable to assume, in planning operation, that the lung is adherent to the costal pleura in this region. A window in the chest wall should be opened down to the pleura by the excision of a section of one or two ribs. This should be done in the region that seems, from the physical examination and X-ray, to be the nearest approach to the abscess. (Let me say here that I do not believe it is ever justifiable to attempt to place an aspirating needle into a lung abscess through the chest wall.) If inspection of the pleura shows it to be thickened, grayish white, with no movement of the lung with respirations beneath it, an opening into the lung may be made immediately with confidence that the lung and pleura are adherent. On the other hand, if the pleura seems normally thin, and the lung is seen moving with respirations, it is better to do the operation in two stages. The lung can be made adherent to the costal pleura by placing a gauze sponge against the pleura and leaving it there for four or five days, when the second stage may be safely undertaken. Sutures may be used to sew the lung and pleura together, but this accomplishes no more than the simpler method, and in the process of placing the sutures a pneumothorax may be created. Before suturing the lung to the pleura, or packing gauze against it, further search for an

adherent area should be made by excising a section of the rib, above or below as seems best, and inspecting the pleura again. It is not uncommon to find that the original approach is a rib too low or a rib too high. If no adherent place can be found it seems to me the best procedure is to give the patient some form of positive pressure anesthesia, to open wide the thoracic cavity, explore it, find the abscess area, and bring this to the chest wall and suture it there. A delay of four or five days to a week should follow this procedure before opening the abscess, in order that adhesions may form, so that an empyema will not follow the opening of the abscess.

An abscess may be opened in various ways. Personally, I do not believe in aspirating it, even with the adherent lung before me. I see nothing to be gained by this technique except a little moral support, as frequently the abscess will not be found with the needle, or it may be empty so that aspiration obtains no pus. Surely then the operator will not abandon any further search for the abscess. The lung must be opened and the abscess found. So why run the risk of a dangerous hemorrhage by putting a needle into the lung. A small incision should be made into the lung and then with the finger that part of the lung explored for the abscess. The finger can readily recognize the difference between normal lung and the thick, tough pneumonia which always surrounds the cavity, and can easily tell when it breaks through into the abscess. Often when this takes place the operator and his audience will be pleased by the sight of actual pus coming from the lung, but if the cavity happens to be empty at this moment there will be no pus seen. However, if the surgeon is greeted with

a foul blast of air on withdrawing his finger, or if the finger has the characteristic smell on its end, he may be sure that he has found the abscess. Some surgeons prefer to open into the abscess with the cautery, but in doing this any blood vessels encountered will be seared over by the heat, so that when sloughing takes place a secondary hemorrhage may follow. An abscess should be drained with a large soft rubber tube. After two or three days its position should be slightly changed each twenty-four hours, so that it will not erode through any vessel that it may be resting against.

An abscess that has existed for a long time should be drained for a long time. It is better to drain for too long a time than for too short a time, as, if the tube is removed too soon, a recurrence will surely take place. No irrigations can be used. At first, cough must be fairly well controlled by narcotics. The same complications that may occur with a septic condition in the lung before operation may follow it, but the one to be most dreaded is secondary hemorrhage. Fortunately, this does not occur often. If it does occur, it is usually not very early in the convalescence. When this takes place, it is a most distressing thing to the patient and surgeon. It is often difficult and occasionally impossible to control it, as the bleeding takes place both through the wound and up through the bronchus and mouth, so that the bleeding is in two different directions. When this takes place, the tube should be removed and the cavity packed tightly with gauze. Morphine in fairly large doses should be given. Personally, I feel that the packing should not be disturbed for from one to two weeks, and when it is removed it should be replaced by another gauze pack. Some packing

should be kept in the cavity until it is entirely obliterated. In the usual case in which no hemorrhage takes place, the tube should be kept in until the cavity is also obliterated. In the chronic case, in which drainage has been kept up for a long time, with little or no evidence of the cavity closing, I believe Graham's method of partial lobectomy with the actual cautery should be done. Following this, the packing should be kept in until the cavity is entirely closed.

The immediate operative mortality is about 15 per cent., and I believe that from 60 to 65 per cent. of the cases may be expected to be cured or permanently improved. By this latter is meant that in a few cases it is necessary to continue the drainage by a very small tube or by means of a permanent fistula indefinitely. It is far better to go through life with a small sinus discharging a few drops of pus each day than to have a recurrence. These individuals can do anything in life except go in swimming. A very small number of cases, probably less than 5 per cent., leave the hospital having made an excellent convalescence. They do well for several months and then have very slight bleedings, that gradually increase until a fatal hemorrhage takes place if nothing is done for them. These patients should be returned to the hospital and a partial cautery lobectomy done.

The treatment of localized bronchiectasis may be divided into medical, bronchoscopy, artificial pneumothorax, and surgery. I think medical treatment can be dismissed in a word by saying that no patient will ever be cured by it. If a patient can devote his life to taking care of his health, spending his winters in a warm, dry climate, he may live a long time. If a foreign body lodged in a

bronchus is the cause of the bronchiectasis its removal by the bronchoscope will often cure the disease, granted that the foreign body has not remained in the bronchus so long that a definite suppurative bronchiectasis and local pyemia have developed. If this has taken place, the removal of the foreign body will have little beneficial result. I cannot conceive how aspiration or irrigation can do more than temporarily benefit the condition. It should not be expected to produce a cure.

I do not think that artificial pneumothorax can cure this condition, even if there are no adhesions, so that a complete collapse of the lung can be brought about. The general condition may be temporarily improved, but never cured. The same complications may be encountered in keeping up artificial pneumothorax over a long period of time, as already mentioned in using this form of treatment in lung abscess; for example, empyema, air embolus, and the occurrence of fluid in the pleural cavity.

Surgery of bronchiectasis may be divided into operations that tend to permanently collapse the lung by extrapleural thoracoplasty, drainage operations, and those that remove the diseased condition of the lung. The only possible cure, as far as I know, is the actual removal of a part of or the whole lobe. Before taking up this latter operation, I wish to mention the treatment by collapsing the chest wall, as certain surgeons believe this to be the ideal procedure. In this technique, sections of ribs are removed, from the first to eleventh, in much the same way as in pulmonary tuberculosis. The operation should be done in two, three, or more stages. I am quite ready to acknowledge that the general condition of the

patient is often materially improved by this, but I do not believe any actual cure can be produced. It is often worth trying in certain cases, as it is a very safe operation, the mortality being about nil, and certain benefits can be pretty well assured. If one will picture the pathology of this condition, it can readily be understood that no drainage operation will ever cure it. Here, again, the actual opening of a large abscess situated either in the bronchus or in the parenchyma of the lung will, of course, improve the general condition, but as there are manifold other abscesses not draining into this large one, it is unreasonable to expect a cure. It is quite justifiable to do this operation, but not with the expectation of producing a cure. Sometimes a combination of both a collapsing operation and a drainage one will be of some benefit. If this is done, the collapsing should be done first. No cure will be brought about, however.

As I have said before, the only cure is the actual removal of the diseased part of the lung. There are two methods. First, the removal by means of the cautery—Graham's method—and second, the surgical amputation of the lobe or a part of the lobe of the lung. I have already alluded to Graham's cautery lobectomy in speaking of the treatment of certain chronic lung abscesses. In these cases, I think the method ideal. In this method, a window in the chest wall is opened down to the pleura by the removal of sections of several ribs overlying the diseased portion of the lung. If the lung and pleura are adherent, the operation may be continued; if not, steps must be taken to bring about adhesions and the cauterization postponed a few days. With an ordinary plumber's cautery, an area of the lung is opened

and burned. Gauze packing then is applied tightly. This is removed and the lung wound repacked in a few days. In two or three weeks, further cauterization of the lung should be done, and this process should be repeated until all the diseased area is destroyed. Graham does not have any fear of either hemorrhage at the time of operation or after it. This he largely accounts for by the fact that the pulmonary blood pressure is only one-sixth of the general blood pressure. But it should be remembered that the pressure in the bronchial arteries is the same as that of the general circulation. I have been much interested in this method and have tried it a number of times. To be honest, I am not enthusiastic over it, but needless to say this technique in my hands is probably not the same as in Graham's hands. Hemorrhage, both at the time of operation and secondarily, has greatly upset me. I have had a patient have a secondary hemorrhage at the end of two weeks and be dead in five minutes. I have had another patient have a hemorrhage on the operating table, the blood coming from the bronchus and out of the patient's mouth, but none from the wound. Fortunately, this was controlled. The technique of cauterizing the lung is a very blind one to me. It seems rather impossible to know just how much or how little has been done. I well remember an Italian woman, whose right upper lobe I tried to remove by this technique. I cauterized this four times, and at the last operation thought I had probably burned it all out. She died a week or two later. Autopsy showed this lobe to be an almost solid mass as large as a grapefruit, with many walled-off abscesses, and the amount of lung that I had removed, in four sittings, was about

the size of a hen's egg. This showed me how futile my efforts had been. It is only fair to add that Graham has had excellent results, having cured a number of patients, and his mortality is very low.

The last operative technique that I shall mention, and that only briefly, is the amputation of a lobe, or part of a lobe, of the lung. There are various methods of accomplishing this. Undoubtedly the safest is that done in two stages. At the first the thorax is widely opened, explored, and the diseased lobe freed from adhesions if there are any, and there usually are. This is then surrounded by rubber dam. Some method should be used to make the good lobe become adherent, such as rubbing it lightly with gauze, or placing a thin layer of gauze between it and the parietal pleura. (This should be removed in forty-eight hours.) The chest wall is then closed. In about a week or ten days the wound is re-opened and the diseased lobe removed. The pedicle should be carefully tied off in sections. If a part, only, of a lobe is to be removed, this is done in much the same way. The diseased area is clamped off, removed, and the stump carefully sutured. Unfortunately, the mortality resulting from the removal of a lobe is almost prohibitively high. In Lilienthal's hands, who has performed this operation more times than any other surgeon in this country, the mortality is 47 per cent. I have done this six times. One case only recovered, and it may interest you to know what happened to the others. One did beautifully for sixteen days, then died in a few minutes from hemorrhage. One died in five days. The cause of the death I do not know, except that he refused all nourishment during the entire

time that he lived. (Of course rectal feeding was used.) Another died ten or twelve hours following operation. In this case, at the end of the operation she was transfused, not on account of loss of blood, but merely on general principles. Her temperature steadily rose to 105. I cannot help thinking the transfusion may have had something to do with this death. One case died five or six weeks after operation, brain abscess being the cause. The first case I ever did died soon after operation from shock. This was a very difficult operation on account of adhesions. At the present time, I should know enough not to attempt the operation under similar conditions. This is a sad story, but one well worth knowing. Recently I have used a very different technique. In this operation, after freeing the lobe of the lung, sections of the ribs overlying it are removed, so that the chest wall can collapse a certain amount, and then as much as possible of the lobe is brought out on to the chest wall and sutured there. In about ten days this area will either slough off or it can be removed without any anesthetic. I have only done one case by this method, but this one made a very nice convalescence, and naturally I feel quite encouraged by this. However, I realize one case is too little to base any opinion on. The pleural cavity, I believe, will always become infected after either of these operations and provision should be made for this at the time.

Operations of this magnitude cannot be urged, but occasionally one meets with a patient whose life is so miserable and who finds that he cannot live at home, or with anyone, on account of the fearful odor associated with him; and it is this class of patient who, in spite of

knowing the danger run, will be glad to take this chance. As the years go by, I firmly believe that a technique will be found that will reduce the operative mortality to a reasonable one. When this takes place, medical men in whose hands the patients are will quite naturally be more inclined to urge, or at least

allow, their patients to be operated upon.

I have tried to show you some of the manifold difficulties that thoracic surgeons are trying to deal with in just this one branch of chest surgery. If I have aroused your interest, I shall feel well satisfied.

COUNTY NEWS AND NOTES.

Aroostook County Medical Society.

The Aroostook County Medical Society held its annual meeting at the County Court House, Houlton, June 8th, 1926. Twenty members and one visitor were present.

The meeting was called to order at 10.00 A. M., Dr. F. W. Tarbell, President, in chair.

The minutes of the last meeting and Secretary's report were read and accepted.

The following officers were elected for the ensuing year: President, Dr. A. L. Sawyer, of Fort Fairfield; Vice-President, Dr. P. L. B. Ebbett, of Houlton; Secretary and Treasurer, Dr. J. G. Potter, of Houlton; Censor, Dr. A. J. Fulton. Dr. F. W. Tarbell, the retiring President, was chosen as delegate to the Maine Medical Association for two years.

Dr. Francois J. Faucher of Grand Isle was admitted to membership.

A resolution opposing the Shepherd-Towner Bill was introduced and after discussion was adopted. The proposed amendment to the Harrison Narcotic Law, as outlined in the *Journal of the American Medical Association*, was discussed and the Secretary delegated by the society to notify our representatives in Congress of our opposition to the proposed change.

Dr. Edwin Place, Chief of Clinic, South Department, Boston City Hospital, gave a very fine address, taking for his subject, "Practical Experiences in Contagious Diseases from the Standpoint of the Practitioner." His paper was very interesting and instructive, and greatly appreciated by those present. In connection with his talk, Dr. Place demonstrated the technique of the Shick and Dick tests. A round-table discussion of Dr. Place's paper took place, and the distinguished visitor was kept busy answering questions.

Dr. F. W. Tarbell delivered the presidential address, advocating better and more instructive programs for the association.

Dr. F. H. Kallock, of Fort Fairfield, read a paper on the "Thyroid and Its Diseases." He placed especial emphasis on treatment, and gave the result of his observations during his recent course of study in New York.

Dr. F. E. Bennett, of Presque Isle, was last on the program. His paper, "Value of Food, Proper Food and Proper Eating," was much enjoyed.

Each of these papers provoked a spirited discussion.

The meeting was adjourned at a late hour in the afternoon.

DR. JOHN G. POTTER,
Secretary.

JOURNAL OF THE MAINE MEDICAL ASSOCIATION

Dr. Frank Y. Gilbert, 148 Park St., Portland, Editor-in-Chief

Dr. James A. Spalding, Portland, Necrologist

Dr. Bertram L. Bryant, Bangor, Secretary Maine Medical Association

Dr. Stanley P. Warren, Portland, Chairman, Board of Councilors

Dr. Clarence Kendall, Augusta, State Commissioner of Health

Dr. C. A. Moulton, Hartland, Chairman Committee on Public Relations

Dr. E. H. Risley, Waterville, Chairman Cancer Committee

Dr. Thomas A. Foster, Portland, Chairman Scientific Committee

EDITORIAL COMMENT

Our Medical Meeting at Poland.

The meeting of our Association for 1926 is a thing of the past—an event of two days and more, to be looked back to with pleasure and satisfaction, full of instruction and profit. The well planned program was carefully carried out, and the discussions fitted in remarkably well with the character of the papers read, although, to the regret of some of the members, they did not seem to be quite so prolonged as usual.

One matter of regret frequently mentioned was that the intermission between the afternoon paper and the banquet was not more carefully planned for, to please the members. Provision was made for those devoted to golf, but outside of that, nothing was offered to others. Some announcement of a chance to listen to music or to indulge in progressive auction might have been made. Meetings held at large hotels in the country offer the charm of out-of-doors, but when there is nothing else out-of-doors except to gaze on the distant mountains, time is likely to hang heavy on some of us, for let us not forget that we cannot walk on the country roads nowadays except at

the risk of life, while the same danger follows those who meander along the links between various sets of players.

The banquet was delicious and beautifully served, and the two speeches that followed were a delight to the ear, both of the orators possessing a wonderful gift of effective and genial delivery.

The program for the second day, including the symposium on obstetrics and the attractive address before the Eye and Ear Section, was exceedingly well carried out.

We think, at this point, that a volunteer set of case reports offered by half a dozen of the leading men in the state would make a remarkable addition to any program for another meeting. We suggest, therefore, that for the oncoming year of 1927 the program should include an hour or two of case reports on medicine, surgery, obstetrics, orthopedics, and the chief specialties, including the eye and the ear. Laboratory reports and surgical operations have their place on every program, and are highly to be commended, but a few reports of actual cases seen, treated, cured or relieved should be brought forward at every

meeting. From this point of view especially, we regret that nothing so far has ever been said before our Association concerning the innumerable and complicated accidents produced by motor cars. Case reports—one or more—showing two, three or even four fractures, with surgical shock and internal ruptures of the liver or spleen from motor car accidents, would, with first aid suggestions, add greatly to the freshness and interest of our program. From this point of view we say that in

one county, for example, more than forty exceedingly instructive motor car accidents occurred in the season of 1925, but so far as we can discover none of them were ever exhibited, mentioned or discussed at any county or state meeting. It seems to us, additionally, that the presentation of such cases read verbally, but chiefly spoken offhand, would prove very interesting to those who listened in, while it would help out the freedom of speech so desirable as a possession to many of our members.

—J. A. S.

NECROLOGY

Charles William Packard, 1833-1926

We have to announce, at the advanced age of 93, the death of Dr. Packard, who was born in Brunswick, Me., March 7, 1833, and died in New York on the 19th of March, 1926. He was a man of distinguished ability in medical circles of New York State and City for many years and an honorary alumnus both of Dartmouth and of Bowdoin Colleges.

Frederick Berthel Peabody, Richmond, 1875-1926

Dr. Peabody, a man of high standing in medical and Odd Fellow circles, died March 23, 1926, after an operation for suppurative arthritis, which had begun two months earlier as a sequence of an attack of the mumps with myocarditis. Previous to this, he had been in perfect health for years.

He was born in Freeman, April 13, 1875, the son of Abner and Louise Wyman Peabody, educated at schools in

Eustis and Phillips, and obtained his medical degree at Bowdoin in 1900. He settled first in Rangeley, moved from there to Farmington, and finally settled for life in Richmond.

He was at one time the Grand Master of the I. O. O. F. for Maine. He also served several terms in the legislature, was selectman of the town and school superintendent for many years.

He married, in the year 1910, Miss Margaret Starbird, of Richmond, and is survived by her and by a son.

American Board of Otolaryngology.

The next examination given by the American Board of Otolaryngology will be held in Denver, Colorado, at the University Hospital, on Monday, September 13, 1926. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

BOOK REVIEWS

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1925. Cloth. Price, postpaid, \$1.00. Pp. 90. Chicago: American Medical Association, 1926.

This volume contains the reports of the Council on Pharmacy and Chemistry that have been adopted and authorized for publication during 1925. Some of these reports have appeared in *The Journal of the American Medical Association*. Others are now published for the first time.

The annual volumes of the "Council Reports" may be looked upon as the companion volumes to New and Non-official Remedies. While the latter describes the medicinal preparations that are found acceptable, the former contain reports on the products that were not accepted. The present volume contains reports on the following products which the Council denied admission to New and Non-official Remedies: Agri-lin; Benzyl Viburnum Compound; Bichloridol and Salicidol; "Colloidal Gold"; Diabesan; F. & R.'s Genuine Gluten Flour; Geroxide; Hoyt's Gluten Bran Flakes; Horse Dung Allergen-Squibb, House Dust Allergen-Squibb, LePage's Glue Allergen-Squibb and Street Dust Allergen-Squibb; Incitanin; Liposan; Loeser's Intravenous Solution of Calcium Chloride; Loeser's Intravenous Solution of Sodium Thiosulphate; Mercodel; Orargol; Parathyroid with Calcium; Pollen Extract Gramineae, Pollen Extract Cheno-

podaceae, Pollen Extract Ambrosiaceae and Pollen Extract Artemisiaceae—P. D. & Co.; Rayminol; Rheumeez; Mitysol; Some Wagner's Preparations; Tablets Calereose with Iodine; Digifortis; Trepol and Neotrepol; Tricalcine; Viriligen, Glandular Comp. and Pineal Comp.; Vitalait (Vitalait Laboratory, Inc., Newton Centre, Mass.) and Vitanol.

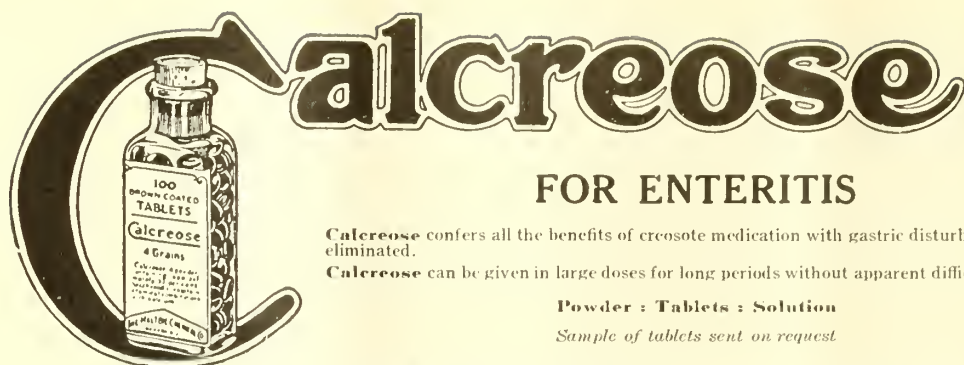
The volume also contains reports on products which were included in former editions of New and Non-official Remedies, but which will not appear in the 1926 edition because they were found ineligible for further recognition.

The volume contains reports of a general nature: for instance, a report on the use and utility of digestive enzymes in therapeutics and a preliminary report on spleen and red bone marrow.

Physicians who keep fully informed in regard to the value of proprietary remedies will wish to own this book.

Rhus Dermatitis. By James B. McNair. University of Chicago. Price, \$1.75.

This is one of a series of handbooks issued in a science series, mostly for students, but in the case of this present work a book of much value to practitioners of medicine. Although ivy poisoning is rare in some parts of the country, in others it is frequent enough to demand a treatise like this for the benefit of patient and physician alike. It goes into the pathology and chemotherapy of poison ivy and enables the student of medicine to understand what it is all about, and the practitioner the best means of treating attacks. We commend this book highly as of much value to the medical library of to-day.



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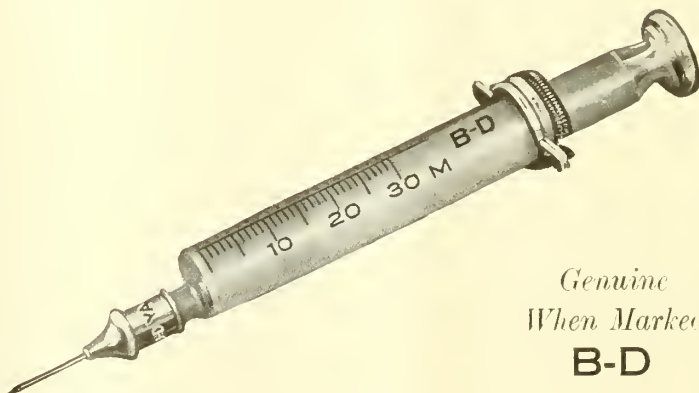
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OF



THE

Maine Medical Association

The Official Organ of the State and County Medical Societies

VOL. XVII, No. 8

AUGUST, 1926

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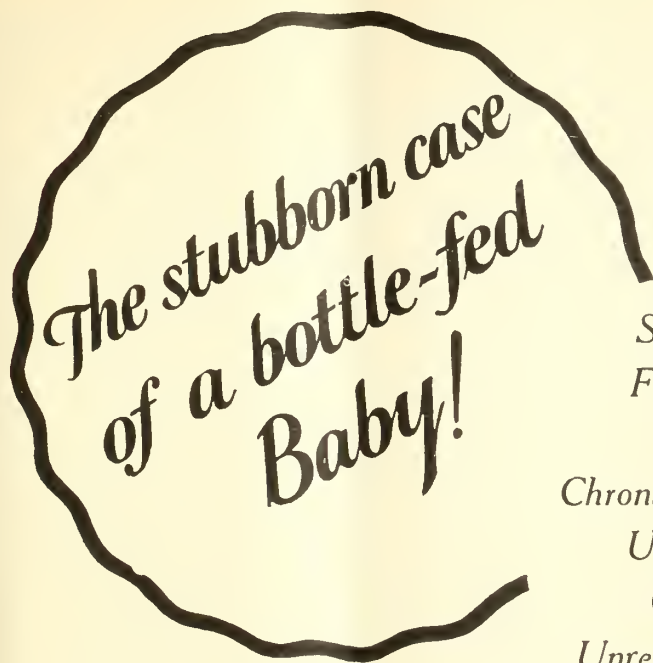
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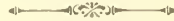
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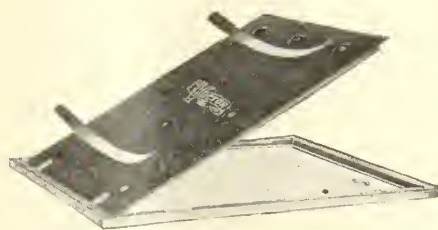
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It is to be hoped that the establishment of both an American and an International standard for pituitary extracts will in part correct a situation which has become intolerable. At least a definite standard of strength now has the stamp of government authority. Gratifying as this is, however, it remains to be said that all pituitary extracts will not henceforth be of equal virtue.

Entirely apart from the question of potency, we have established other standards for Pituitrin which have not yet been written into official requirements. As the result of 18 years of steady and continuous work on Pituitrin we have developed a product which in uniformity, in stability, and in *low content of protein matter* surpasses any other pituitary extract which we have been able to find on the market and subject to examination in our laboratories.

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THE JOURNAL

OF THE

Maine Medical Association

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AUGUST, 1926

No. 8

TRANSCRIPT OF PROCEEDINGS AT THE SEVENTY-FOURTH ANNUAL MEETING OF THE MAINE MEDICAL ASSOCIATION

First General Session

RICCAR INN, SOUTH POLAND, MAINE,
JUNE 11, 1926.

The session was called to order at 9.30 A. M., by the President, Dr. J. D. Phillips, of Southwest Harbor.

President Phillips: Prayer will now be offered by the Rev. Dr. Wolfe, of Lewiston.

Dr. Wolfe: I want, if I may, as a kind of prelude to this little prayer that we are going to have together, to read these few verses that somehow happened into my mind since I was asked last evening by Dr. Sturgis to take this part. It seems to me that these are wonderfully suggestive words, and entirely appropriate at the opening of this convention of medical men. These verses are taken from the forty-fifth chapter of Isaiah, Old Testament, and to my mind are very, very remarkable:

"Thus saith the Lord to his anointed, to Cyrus, whose right hand I have holden—" [Now Cyrus, it is to be remembered, was a Gentile, and, of course, our Old Testament, as well as our New Testament, came from Jewish parents.] "Thus saith the Lord to his anointed, to Cyrus, whose right hand I have holden, . . . I will go before thee, and make the crooked places straight: I will break in pieces the gates of brass, and cut in sunder the bars of iron:

"And I will give thee the treasures of darkness, and hidden riches of secret places, that thou mayest know that I, the Lord, which call thee by thy name, am the God of Israel.

"For Jacob my servant's sake, and Israel mine elect, I have even called thee by thy name; I have surnamed thee, though thou hast not known me.

"I am the Lord, and there is none else, there is no God beside me: I

girded thee, though thou hast not known me.

"That they may know from the rising of the sun, and from the west, that there is none besides me. I am the Lord, and there is none else.

"I form the light, and create darkness: I make peace, and create evil—" [That is a wonderful thing to ascribe to the Deity. Somehow the common notion has always been that evil—and I suppose there are those philosophers who ascribe the things that you have to deal with all the time, or, at any rate, the major part of the time, as evil—they used to be ascribed to demons, to the devil. This writer has ascribed it to God himself.] "I form the light, and create darkness: I make peace, and create evil: I the Lord do all these things.

"Drop down, ye heavens, from above, and let the skies pour down righteousness: let the earth open, and let them bring forth salvation, and let righteousness spring up together: I the Lord have created it."

Now let us unite in prayer. [Invocation offered.]

President Phillips: We will now listen to an address of welcome by Dr. Robert J. Wiseman, Mayor of Lewiston. [Applause.]

Dr. Wiseman: Ladies and Gentlemen: In behalf of the members of the Maine Medical Association, it gives me great pleasure to extend to you, one and all, a most hearty welcome to Poland Springs and to this great convention, and as the Mayor of the City of Lewiston, representing 37,000 souls,

I extend to you all a most hearty welcome to the City of Lewiston. I hope, if you do visit Lewiston, which is the second city in the state, that you will visit our churches: our various institutions, such as the Central Maine General Hospital, St. Mary's Hospital, the Healy Asylum, or the Orphanage for Boys, and the Orphanage for Girls; visit our Bates College, our Armory; visit our various textile plants, where are manufactured the best of cotton goods that are sold all over the world; also visit our streets and our parks. And in behalf of the City of Lewiston, I wish to present to you the key of the city. This key will not only fit the doors of the various institutions of Lewiston, but will also fit all the establishments here at Poland Springs. [At this point a huge key was borne to the front by four young ladies amid applause and laughter.] This key will probably not fit every lock, but it certainly will fit the situation. [Applause.] If, perchance, you should make a mistake, as we sometimes do, and go home with this key in your pocket, please put it in the mail box and return it to the City of Lewiston. [Laughter.] You may use this key, albeit it is quite a stunt to do so. Some of you ladies may sit right on the key and have your photographs taken as a souvenir of this great convention.

Ladies and gentlemen, I hope that this great convention will be of great good to all the physicians and surgeons of the State of Maine. I hope that you will have great profit from it, because there are some doctors who live in the

smaller communities who do not have the opportunity of the doctor or surgeon of the larger cities, where in the various institutions they see cases that these people who live in the smaller communities have no chance to see, and hear great men expound the latest treatment of all diseases. When you return home I hope you will apply these new methods and these new treatments to your own patients, because you are living for your patients; and I hope that you will succeed in these new treatments and apply them to your patients who are waiting for you. I thank you. [Applause.]

President Phillips: I now have the pleasure of introducing to you the President of the American Medical Association, Dr. Wendall C. Phillips. [Applause, the convention rising.]

Dr. Wendall C. Phillips: Mr. President, Members of the Maine Medical Convention, Ladies and Gentlemen: It is really a unique thing to have the President of the Maine Medical Association and the President of the American Medical Association both of the same name, and it would seem that the Phillips family is in the saddle just at this time. But there is more than just the mere coincidence of this occasion, because, forty-seven years ago this fall, I wandered from the great north country of the Empire State into New York City to enter the Medical Department of the University of the City of New York, and a year later another Phillips, from Maine, wandered from Maine to New York City to enter the same school. I graduated in 1882 and he in

1883, and don't let anybody tell you that he is only sixty years old. That is what he looks to be, but he is older. [Laughter.] He could not have practiced forty-three years and be only sixty years old. I have practiced forty-four years, but I remember him very well. On my way up I looked at the program, and I said, "I wonder if that is the same Phillips who was in the medical school back there in those days!" I came here, and, lo and behold, it was the same fellow. I do not know that we have ever met from those days in college until this morning, and it is really a great pleasure to me to know that at least two members of that far-off time have lived to practice over forty years. I wonder if you realize that the average length of time that men practice is far under forty years? We have both gone the limit, almost. I hope, however, to go on for a long time yet, and I certainly hope that the dear man who is President of your Association may have a like experience.

I had the key to Maine sent me by your Secretary, so I got in all right. I shall try to conduct myself in such a manner while here that, at least, I will be able to find my way out of Maine. I am not going to make any extended address this morning, because I do not want to give away the thunder that I may have for the banquet this evening. I just want to add one word, however, to what the Mayor of Lewiston has just said regarding the family physician, and one phase of the experience of the family physician, and I wish you would take it home, think it over and talk it

a little bit. I do not believe there has been any one element that has been, perhaps, a more important factor in the maintenance of the family home and the family life of this great country of ours than the old-time family physician. We little know what the influence of the family physician has been in the family life and in the family home, and, you know, the family is the unit of American life. While we must rearrange many things in connection with medical education, it seems to me we should do everything we can to make that family physician the unit of medical life in every hamlet, in every city, in every community, rather than to have the medical practice of the community carried on by the state, or, as we speak of it sometimes, by the honest basis of wholesale—the family physician, maintained, kept up, improved, bettered, not because the community will get better service and more effective service, but, back of it all, because it is an important thing in the maintenance of the family life and the family homes of our country. [Applause.]

President Phillips: Anyone who has any feeling at all must be grateful to the Doctor for the kind words that he has said in reference to the Phillips family. I do hope that the branch down in Maine will try to be as faithful in their work as has the branch in New York. The first paper on the program is by Dr. Joseph Muir, of New York, on "Radiotherapy of Cancer of the Uterine Cervix." [Applause.]

Dr. Joseph Muir: Mr. President, I

think that I, too, should have recognition, coming here, as I do, a stranger. If Dr. Phillips of New York was of the class of '82 at the University of New York, and Dr. Phillips of Maine was of the class of '83, I am the youngest man, because I was of the class of '84. [Applause.]

Dr. Muir reads.

The President: Next is "Blood Counts in Diagnosis," by John Hewat, M. D., pathologist at the Central Maine General Hospital, Lewiston. [Applause.]

Dr. Hewat reads.

Adjourned until 1.30 P. M.

Second General Session

The meeting was called to order at 1.30 P. M., Friday, June 11, by the President, who then read his annual address.

The President reads.

Dr. Marshall, of Portland: Gentlemen, I move you that the thanks of this Association be extended to Dr. Phillips for his able and eloquent address, and that a copy be requested for publication.

The motion was duly seconded, put by the Secretary, and unanimously carried.

President Phillips: I thank you. Next on the program is to hear from visiting delegates. We have with us Dr. R. H. Bennett, from New Hampshire, who will speak to us. [Applause.]

Dr. R. H. Bennett: Mr. President and Members of the Maine Medical Association: It gives me pleasure to bring you greetings from the New

Hampshire State Medical Society, and to express to you the good fellowship of your neighboring state. I wish to express to you once more the love the medical profession of New Hampshire has for the State of Maine. This, in a measure, arises from the fact that we have men who were reared in Maine, and some who were born in Maine, now practicing in the State of New Hampshire. To me, personally, it is a pleasure to be here, and in fact it is almost like coming back home, as I see here to-day some of my old instructors and some of my fellow college classmates. [Applause.]

The President: I have not been able to find delegates from other states, but I will call the states in the hope that somebody will respond. Is there anyone here from Vermont? [No response.] Massachusetts?

Dr. R. C. Hurd: Mr. President and Members: I want to say that it is a great privilege and honor to be here at this annual meeting of the Maine Medical Association as a delegate, and to extend to you the cordial greetings of the President of our Society and of the fellows of the Massachusetts Medical Society. Massachusetts and Maine should stand together in co-operation to elevate the standards of medical practice and to promote the influence of physicians everywhere throughout New England in behalf of the public welfare. [Applause.]

President Phillips: Rhode Island? [No response.] Connecticut? [No response.] I think there is a delegate here from Pennsylvania.

Dr. Beardsley, of Pennsylvania: Mr. President, our state will be so much better represented by Dr. Deaver that I ought not to speak, but it certainly is a great pleasure to be your guest here to-day. It is nice to come to a meeting of a state association where there are so many Americans. Occasionally we have to look in vain in the larger centers for Americans. I came up here particularly to meet my classmate, roommate, and one of my best friends, Dr. Wakefield, and in the hope of seeing some of the other Jefferson graduates, but I cannot help saying to you that Maine will need doctors ten years from now more than she does to-day. Some of the men I have talked with to-day have spoken about retiring. A doctor ought never to retire while he is useful to the public. He should go on doing his work, because there is no one to replace the man of experience. Now I know that many men, my seniors, feel that they have lost touch with some of the modern scientific methods. Gentlemen, we teach our young men science, but we cannot teach them the art of medicine. It has taken you thirty years to learn the art, and it will take them thirty years. They have a better start than you had, because the fundamentals of medicine have perhaps been improved a little, but when it comes to common sense they have not improved on that. I am ready to say that the students we teach to-day have not the same amount of common sense that they had thirty years ago, and it is something that we cannot teach them. They have not that interest in the pub-

lie which their predecessors had thirty years ago. They are tinctured by the commercial atmosphere that exists, not only in medicine, but in many lines. Are they any better men than we had thirty years ago? I am saying that unless their fathers and mothers are unusual, they are not as good. We have got to go right back to first principles. We have got to have a good home life, and, if there is not good home life in Maine, where can you look for good home lives? We have got to go back to first principles. We have got to have fine young fellows with right ideas. Then we have got to give them the science, and then the practitioners that they work among have got to give them the background of culture, their background of ethics—a thing practically unknown to-day as far as the finer principles of ethics are concerned.

You men who have borne the heat of the day have got to educate these younger men that we are turning out. I appeal to you, in the name of our sister university, and there is no better. Send us some good men from this rock-bound State of Maine: send them to the university: send them to Jefferson: send them to any school that is turning out practitioners of medicine, and we will take good care of them. We will give them the science; you will have to teach them the art. I thank you very much. [Prolonged applause.]

The President: If there is no visitor present from any other state, we will proceed to the next on the program, which is a report of four cases of men-

ingeal and cerebral complications of otitic origin, by A. L. Grant, Jr., M. D., Auburn, Maine.

Dr. Grant reads.

The President: I understand that Dr. Wyman, of Massachusetts, one of the delegates from that state, is present. We would be glad to hear from him at this time.

Dr. Wyman: Mr. President and Members of the Maine Medical Association: It is a great pleasure to have the opportunity of coming here from Massachusetts: in fact, I feel very much at home here. While I practice in Boston, I was born in Sebec, Maine, and my grandfather and great grandfather of Atkinson, Maine, practiced there a great many years. I bring to you the cordial greetings and best wishes of our society. Close co-operation between our societies cannot but make the medical profession of greater force in promoting public welfare, and I wish that we might in the future possibly have a New England Medical Society on the same lines as the New England Pediatric Society and Surgical Societies, where we could all meet on common ground and talk over our problems together. I think a society of that kind of the New England States would be of mutual benefit to us all. [Applause.]

The President: I know you will all be interested in the next paper on the program, "Surgical versus Medical Treatment of Gall Bladder Diseases," by Dr. John B. Deaver, of Philadelphia. [Applause, the audience rising.]

Dr. Deaver reads.

The President: We have all been

very much interested in this paper. I would say that the Secretary wishes me to announce that the House of Delegates meets immediately after the closing of this meeting in this room, and the Council.

If there is nothing further, we will recess now until 7.00 o'clock this evening in the banquet hall at the hotel.

Adjourned.

Third General Session

Called to order Saturday morning, June 12, 1926, at 9.15 A. M.

President Phillips: First on the program this morning is a paper on "Secondary Factors in the Production of Uterine Sepsis," by Leonard H. Ford, M. D., Bangor, Maine.

Dr. Ford reads.

The President: Does anybody have any remarks to make on this paper?

Dr. Richardson: I move that we postpone the discussion of these papers until after the fourth paper is read, before Dr. Kellogg's, and then discuss them all together.

The motion being seconded, it was so voted.

The President: Next on the program is a paper on "Indications for Abdominal Caesarean Section," by H. W. Garcelon, M. D., of Auburn, Maine.

Dr. Garcelon reads.

The President: Next is a paper, "Treatment of Toxemia of Pregnancy," by Adam P. Leighton, Jr., M. D., of Portland, Maine.

Dr. Leighton reads.

The President: Next in order is "Diagnosis of Placenta Previa," by R. L.

Reynolds, M. D., of Waterville, Maine.

Dr. Reynolds reads.

The President: Next on the program is a paper entitled, "Indications and Technique of Forceps Operating and Indications and Technique of Internal Podalic Version," by Dr. Foster S. Kellogg, of Boston. [Applause.]

Dr. Kellogg reads.

Adjourned.

Fourth General Session

The President: The first paper this afternoon is "The Accessory Sinuses of the Nose," accompanied by lantern slides, by George O. Cummings, M. D., of Portland, Maine.

Dr. Cummings reads.

The President: The next paper is by Dr. Tee, of Montreal, on "Treatment of Some of the More Common Fractures."

Dr. Tee reads.

The President: Next is the report of the House of Delegates.

(See page 142, Second Session of the House of Delegates.)

The President: Next on the program is the election of a President-elect.

Dr. Gilbert: Mr. President, I think the question of electing the President is a very important matter. The duties of that office now require a man who will take the time and bear the expense of visiting county societies, thereby involving quite an amount of work. It has been customary to select our President-elect from the county in which the next meeting is to be held, and I take great pleasure in placing before this body the name of Dr. N. M. Marshall, of Portland, as President-elect.

The motion was duly seconded, nominations were closed, and the Secretary was vested with the duty of casting the ballot of the Association for Dr. N. M. Marshall, of Portland, as President-

elect, which duty the Secretary immediately performed, and Dr. Marshall was declared duly elected President-elect for the ensuing year.

Adjourned.

MEETING OF HOUSE OF DELEGATES

First Session

RICCAR INN, SOUTH POLAND, MAINE,
JUNE 10, 1926, AT 7.30 P. M.

The meeting was called to order by the President-elect, Dr. L. P. Gerrish, of Lisbon Falls.

The Secretary called the roll and a quorum was found present. Thereupon, the President-elect appointed as members of the Nominating Committee Drs. A. K. P. Smith, of Bangor; C. B. Sylvester, of Portland; F. E. Bennett, of Presque Isle; O. A. Sprague, of Turner, and D. M. Stewart, of South Paris.

The President-elect also appointed as members of the Reference Committee Drs. Mann, of Houlton; Gilbert, of Portland; Richardson, of Skowhegan; Stetson, of Brunswick; and McNeil, of Bangor.

The President-elect: First, we will

listen to the report of the Secretary, Dr. Bryant.

Secretary Bryant: Of course, the major part of these reports is printed in the JOURNAL, and all reports so printed are referred to the Reference Committee for action. The entire Secretary's report is printed in the May JOURNAL, except the final summary of membership, and this is worked out very interestingly. We do not drop any man from membership until he is two years behind in his dues. If the report comes in that he has moved out of the state, he is dropped. Usually, within a month or so after the close of this meeting, the most of those who have not paid their dues, pay them; so we hold them in membership for two years unless otherwise notified.

COUNTY	MEMBERS 1925	NEW MEMBERS	REIN- STATED	MOVED	DIED	DROPPED	MEMBERS 1926
Androscoggin	68	6		3			71
Aroostook	47	3		3			47
Cumberland	198	12		3	6	2	199
Franklin	16			1			15
Hancock	24	3					27
Kennebec	71	3	2	3	1		72
Knox	31	2					33
Oxford	37	1		3		1	34
Penobscot	99	8	1	2	1		105
Piscataquis	16			2	1		13

COUNTY	MEMBERS 1925	NEW MEMBERS	REIN- STATED	MOVED	DIED	DROPPED	MEMBERS 1926
Sagadahoc	17				1		16
Somerset	32		1				33
Waldo	13	1					14
Washington	41						41
York	67	1	2		1	2	67
Paying direct	10	1			1		10
	787	41	6	20	12	5	797

Net gain over 1925, 10 members.

Chairman Gerrish: This report will We will now listen to the report of the
be referred to the Reference Committee. Treasurer.

Treasurer Bryant:

EXPENDITURES

Journal,		\$ 800.00
Gorgas Memorial,		200.00
Hospital Clinic,		100.00
Medical Defense:		
Pattangall,	\$500.00	
Hayden, copy of testimony,	11.75	
Rand, copy of testimony,	9.00	
		520.75
Secretary's Office:		
Secretary, salary,	\$100.00	
Secretary, telephone,	10.65	
Secretary, travel,	38.26	
Secretary, traveling expenses as delegate, 1926,	228.00	
E. M. Clark, stenographer,	273.75	
Supplies, printing, etc.,	107.05	
American Medical Directory,	12.00	
		769.71
Health Examinations:		
Manuals,	\$64.50	
Letters,	7.55	
Express and postage,	29.36	
		101.41
Committee on Venereal Disease, Annual Meeting, 1925:		25.00
Clay, stenographer,	\$112.28	
Gilbert, stamps,	15.00	

Programmes,	\$41.25	
Sherman, stenographer,	6.00	
Hotel Lorraine,	38.50	
Tickets,	2.50	
Speakers:		
Expenses, C. H. Best,	35.00	
Expenses, R. W. Jackson,	40.35	
	<hr/>	290.88
Programmes and postage, Annual Meeting, 1926,	67.85	
Secretaries' Meetings (\$43.55, \$38.95),	82.50	
Councilors' expenses,	18.01	
Blake, Barrows & Brown, bond	5.00	
Merrill Trust Co., for securities,	6,155.70	
	<hr/>	\$9,136.81

CREDITS

Cash on hand,	\$8,686.73	
Interest on deposits,	6.97	
Securities:		
Two bonds, Mortgage Bond Co., of N. Y., Nos. 1261-1262, 5½%,	\$2,000.00	
Two bonds, So. Calif. Edison, Nos. M-8776 and M-8779, 6%,	2,000.00	
One bond, City Water Co., Chattanooga, M-1973, 5½%,	1,000.00	
	<hr/>	\$5,000.00
Interest on securities,	285.00	
Addison Thayer Fund:		
Bond, Washington Building, M-2452, 6%,	\$1,000.00	
Interest on Thayer Fund security,	60.00	
Cash received from Venereal Disease Committee,	629.11	
12 shares preferred stock, A. A. C. Co., at		
Cash received from dues,	2,772.00	
Total Credits,		\$12,439.81
Total Expenditures,		9,136.81
		<hr/>
Balance—cash on hand,		\$3,303.00

Cash in checking account,	\$2,328.89	
Cash in savings account (coupons from above bonds),	345.00	
Cash in savings account (Venereal Disease Committee Fund),	629.11	
		\$3,303.00
Securities,		6,000.00
		<hr/>
		\$9,303.00

The following resolutions referred last year to the county societies were adopted:

First: That it shall be the policy of members of this Association to charge to corporations or insurance companies the same fees for services as they would to their other patients in private practice. All instances of disagreement may be referred to the Committee of Public Relations for conference.

Second: That in the future, physicians of the Association neglecting to take out indemnity insurance shall have the same assistance from the Association in their defense as the other members, but that the Association be no longer responsible for their attorney fees.

Third: That this Association recommend to the various county societies that the minimum fee for life insurance and health examinations be five dollars.

Dr. Coombs: I move that it is the sense of the House of Delegates that the program of the State Department of Health for immunizing the children of the state under ten against diphtheria meet with the approval of this body.

The motion being duly seconded, it was so voted.

The Chairman: His second thought

was relative to the emergency work of the Seacoast Mission.

Dr. Coombs: What they wish is the endorsement of the Medical Association, through its committee, of the type of work they are doing. They would like to have some committee authorized to take hold and guide them. I move, Mr. Chairman, that this subject be referred to the Public Relations Committee with the favorable endorsement of the House of Delegates, and that the Committee of Public Relations be authorized to take this matter up.

The motion was duly seconded and carried.

It was voted that the question of some memorial to Dr. Young, by this Association, be referred to the Reference Committee.

The Chairman: Is there any further new business?

It was voted that the bill relative to strengthening the Harrison Act be referred to the Reference Committee.

Secretary Bryant: Mr. Chairman, there is a communication from the American Legion Travel Committee, asking us to endorse the trip to France, in which all may join, and I think this should be also referred to the Reference Committee, that committee to

bring in what recommendation it sees fit; and I so move.

The motion, being duly seconded, prevailed.

The Chairman: The next meeting of the House of Delegates will be after Dr. Deaver's paper to-morrow afternoon.

On motion of Dr. Stewart, it was voted to adjourn.

Second Session

RICCAR INN, THURSDAY AFTERNOON,
JUNE 11, 1926

The meeting was called to order by Dr. L. P. Gerrish, the President-elect.

The Chairman: We will first have the report of the Nominating Committee.

The Nominating Committee's report is as follows:

First Vice President, T. S. Dickison, Houlton.

Second Vice President, W. J. Renwick, Auburn.

Secretary and Treasurer, B. L. Bryant, Bangor.

BOARD OF COUNCILORS.

First District.

Term expires 1927,

S. P. Warren, Portland

Second District.

Term expires 1927,

John Sturgis, Auburn

Third District.

Term expires 1929,

Neil A. Fogg, Rockland

Fourth District.

Term expires 1929,

George E. Young, Skowhegan

Fifth District.

Term expires 1928,

C. C. Knowlton, Ellsworth

Sixth District.

Term expires 1928,

A. K. P. Smith, Bangor

COMMITTEES.

Scientific Committee—E. E. Holt, Jr., Portland; C. C. Morrison, Jr., Bar Harbor; E. H. Risley, Waterville.

Legislative Committee—L. P. Gerrish, Lisbon Falls; J. D. Phillips, Southwest Harbor; F. W. Mitchell, Houlton.

Committee on Venereal Diseases and Their Prevention—G. H. Coombs, Augusta; H. W. Stanwood, Rumford; H. J. Hunt, Bangor.

Committee on State Hospitals—D. M. Stewart, South Paris; L. G. Bunker, Waterville.

Cancer Committee—N. M. Marshall, Portland; H. E. Thompson, Bangor; Mortimer Warren, Portland.

Committee on Health in Schools—Clarence Kendall, Augusta; H. D. McNeil, Bangor; J. A. Spalding, Portland; T. A. Foster, Portland; L. J. Dumont, Lewiston.

Committee on Hospitals—R. W. Wakefield, Bar Harbor; C. M. Robinson, Portland; C. H. Young, Portland.

Committee on Medical Defense—E. G. Abbott, Portland; B. L. Bryant, Bangor; W. G. Chamberlain, Fort Fairfield; E. V. Call, Lewiston; George E. Young, Skowhegan.

Committee on Public Relation—F. W. Mann, Houlton; E. D. Merrill, Dover-Foxcroft; Richard Small, Portland; Clarence Kendall, Augusta; B. L. Bryant, Bangor; F. Y. Gilbert, Portland.

Neurologist — J. A. Spalding, Portland.

Delegates to A. M. A.—B. L. Bryant, Bangor; Alternate, W. E. Webber, Lewiston. F. Y. Gilbert, Portland; Alternate, L. P. Gerrish, Lisbon Falls.

Delegate to National Council—T. J. Burrage, Portland.

Delegates to State Societies—New Hampshire, T. A. Foster, Portland; Vermont, George E. Young, Skowhegan; Massachusetts, A. W. Fellows, Bangor; Rhode Island, William Holt, Portland; Connecticut, Earl Merrill, Bangor.

Visitors to State Sanatoria—Carl O'Brien, Bangor; F. J. Welch, Portland.

On motion by Secretary Bryant, duly seconded, it was voted that the report of the Nominating Committee be adopted.

The Chairman: Next is the presentation of the budget for the ensuing year.

Secretary Bryant:

President's expenses,	\$100.
Salary, Sec. and Treas.,	100.
Stenographer and travel,	350.
Legislative Committee,	100.
Expenses other committees,	100.
Expenses of Councilors,	100.
Journal,	1,000.
Delegates to A. M. A.,	250.
Public health clinics,	200.
Medical defense,	500.
Annual meeting,	300.
Secretaries' meetings,	75.

\$3,175.

This will not be all expended, but it gives us a good wide margin. I would move that the budget be adopted.

The motion being duly seconded, prevailed.

The Chairman: Next is the report of the Reference Committee.

REPORT OF REFERENCE COMMITTEE.

We indorse the movement under way by the American Legion to get service men a sufficient vacation time in 1927, in order to take part in the great American Legion Peace-Time Army that will invade France, and we will co-operate with the American Legion in every way to make the trip a success.

We indorse any action that the American Medical Association has taken, or will take, on the Harrison Narcotic Act and urge that the State Secretary notify the Senators and Representatives of Maine of this fact.

We indorse the work already done by the Medical Clinics held throughout the state for tuberculosis and crippled children, and indorse the general clinics that have been held, and recommend that future clinics be held within the coming year.

We approve and indorse the action of the Secretary and State Association, bringing before the public the subject of regular health examination and urge that county secretaries bring back to their county societies again the necessity of keeping alive this movement.

We would suggest that one meeting each year in the county societies be devoted to this subject of health examination and have a demonstration of the same.

We urge that at least one paper be given on some health subject at the annual meeting of the Maine Medical Association.

We recommend that the MAINE MEDICAL JOURNAL should be made a medium of exchange of medical ideas and for the reporting of interesting and unusual

cases in the different counties. By doing this, we would help every member of the profession in the State of Maine.

The State Association indorses the work of the Maine Public Health Association and urges its members to further co-operate during the coming year. We appreciate the co-operation which is being carried through the county society in placing the scientific direction of the work under the county society and urge upon the members greater co-operation in carrying on the work.

We call the attention of the Association to an alarming condition which has arisen in regard to the clinical crippled children. A large number had been examined and listed who need help and for whom there were no possible facilities. These unfortunates, in so far as possible, are being cared for by the various public nurses. We need a much larger number of hospital beds to carry on this work.

We recommend that there should be better co-operation between the State Association and the State Department of Health in reporting births, deaths, and contagious diseases and recommend that the members take the matter of examination of food handlers seriously in preventing the spread of contagious diseases.

We commend the action of the Medical Defense Committee through which efforts no case of malpractice has been tried in the state this year.

We urge that members read carefully the Treasurer's report, in order to see in what good financial standing we are.

We urge that county societies select their best men for secretary and delegates. These men must be regular in attendance and keep up-to-date in all matters pertaining to the associations,

and we urge that the societies, in selecting secretary and delegates, be careful to get the best there is.

We ask members to read reports of the several Councilors and see the work that is gone on in their districts. We urge upon members that they read the reports of the various committees that were printed in the JOURNAL, as it is only by reading them that the individual member gets any idea of the work that is being done. These committees are made up, as a rule, of hard-working physicians, and the members should read their report in order to keep up-to-date on society matters.

We commend the work of Dr. J. A. Spalding, our Necrologist, as his work is very important for record purposes, and he should receive the thanks of the society for the very good, efficient and painstaking labor, keeping his records accurate and up to date.

We recommend that the chair appoint a committee of five to draw up resolutions on the death of Dr. A. G. Young, who for so many years was the State Executive in the Department of Health, and who was known throughout the country as one of the pioneers in health work.

HARRY D. McNEIL,
FRANK Y. GILBERT,
FRED W. MANN.

Adopted.

REMARKS BY THE NECROLOGIST

The annual report of your Necrologist having been already printed in the JOURNAL, I am spared robbing you of your time in repeating it in the same words in which it is printed. I would like, however, instead of reading the list of deceased members over again, to call

your attention to the need of a thorough revision of our biographical cards, with personal items of unspeakable value to your Necrologist in composing lives of members. The list which I have on hand was made at least fifteen years ago, and in that time we have lost approximately one hundred eighty active members. The result of this is, that we have hardly any data of recent members of our Association, or of their wives, if married. And, by the way, it is startling to see how many newspaper notices of deceased members say not a word about the wives of physicians, women, many of them, of indescribable value to physicians in their busy practice. So, too, we need new cards with the title of the graduating thesis of every member, because, viewing the men as they graduate through their compositions handed in for a diploma, we can often foresee the trend of their minds at that part of their medical career and compare it advantageously with what they actually did in medicine or surgery when they entered active practice.

Now, then, to those who receive such cards, I hope that the answers will be written legibly, with the middle name of the physician and his wife, and of their families, spelled in full, together with the date of birth, college where graduated, and line and place of practice. Having written the answers as plainly as possible, just drop the card into the mail and it will reach me in due season.

Particularly do we miss this year Dr. Charles D. Smith, of Portland, Dr. A. G. Young, of Augusta, Dr. D. Driscoll, of Portland, Dr. Henry M. Moulton, of Cumberland Center, and Dr. Emery, of Biddeford, leading members for many a year.

J. A. SPALDING, *Necrologist*.

The following resolutions, presented by Dr. Stauley P. Warren of Portland, were adopted.

SMALLPOX.

WHEREAS, reliable reports from State Boards of Health and other similar authorities have demonstrated that smallpox is now a common and epidemic disease in many of our states, from which thousands have suffered and many died, and

WHEREAS, it has been established by the facts of more than a hundred years that vaccination is a sure protection against smallpox, and

WHEREAS, it is unreasonable that the protection of vaccination against this disease for the many should be denied them by the prejudices of the few, and

WHEREAS, the State of Maine is peculiarly liable to this dreadful disease by having it brought her by visiting tourists from infested states, by the general traveling public, and also by her nearness to the Canadian provinces, where smallpox is almost always present, therefore

Resolved, by the medical profession, now in annual conference at Poland Springs, in view of the facts thus set forth, that they, as guardians of the welfare of the state, not only of the physical but also of its financial and economic interests, do respectfully urge upon the Legislature of this state the necessity of universal vaccination for its citizens, particularly those of school age.

REPORT OF DELEGATE TO THE N. H. MEDICAL SOCIETY

It is always a pleasure to attend the meetings of this society, for everybody is so cordial and polite in their attention.

The meeting of May 25, 26 was no exception. It was held in the armory in Concord, a spacious hall with a fine chance to speak and to be heard. Your delegate informed the large attendance, including many ladies, of what had been going on in Maine in the past year. Beginning with the Bar Harbor meeting, I went on to speak of our JOURNAL, the value of a stenographer at county and private medical meetings, the advantages of a committee on outside relations, the talk of a medical library in Portland, the state of health in Maine, and the recovery of our former President, Dr. Mann, from his serious injuries. I ended my remarks with a cordial invitation to men within reach of my voice to come to Poland for a drink of water, a plate of fine food, and a great game of golf on one of the most picturesque scenic links in this country.

Various papers were then read by members in the state and without including one on scarlatina, examination of a thousand college students for health, efficiency in county hospitals, and on "Pyelography" by a former member from Rangeley, Dr. E. J. Brown.

Having done my share as delegate to the state medical society of my birth, I beg you to be so kind as to excuse me from going on farther with this interesting task. It is difficult for me, without a motor, to reach the meetings. I thank you for the continued honors, but beg leave to decline further service. Age, too, is beginning its inroads upon my

mobility, and for that reason, chiefly, I beg leave to decline another appointment, taking it for granted that you might wish me to serve you again.

J. A. SPALDING.

Dr. Gilbert: In order to secure second class mail rating, it is necessary to pass the following resolution:

Resolved, That a copy of each issue of THE JOURNAL OF THE MAINE MEDICAL ASSOCIATION shall be sent to each member of the Maine Medical Association, and that each member shall pay of his annual dues of \$4.00, \$1.00 for a year's subscription to the publication.

This is merely to establish a definite subscription list, and each member will be sent a receipt for one dollar paid the JOURNAL and three dollars to the Association.

Resolved, That the thanks of the Association be extended to the physicians of Androscoggin Society (their committees have been untiring in their efforts in arranging for our entertainment), and to the Rickers of Poland Springs, whose unfailing courtesy and hospitality have contributed so much to the success of this meeting.

Due consideration was given to an invitation from the Staff of the Sisters Hospital of Waterville to hold the 1927 meeting at Belgrade, also one from Cumberland County to meet in Portland.

It was voted to hold the next meeting at Portland.

Adjourned.

NECROLOGY

**William Walton Varrell, York Harbor,
1882--1926**

William Walton Varrell, for several years a practitioner at York Harbor, and the son of William Goodwin Varrell, of York, and Hannah Ann Littlefield, of Wells, was born in York, May 29, 1882, went to the town schools in Wells and York and was graduated with high honors at the high school at Portsmouth. He then entered Harvard College as a most promising youth and was doing well, when he suffered a nervous breakdown and left that institution for good. Recovering suitable health, he studied medicine with great success at the medical school connected with Tufts College, and after a severe competitive examination obtained an internship at the City Hospital in Cambridge. There, again, he met with another obstacle to professional ad-

vancement in the shape of an infected hand, with blood poisoning later. Recovering ultimately from this drawback, he settled in York Harbor in 1914, in his thirty-second year. His health, however, gradually and steadily declined, despite the best of treatment, and after long restlessness in a Boston hospital he died there, suddenly at the last, May 28, 1926.

Dr. Varrell was married to Miss Grace Lowell, daughter of Dana Lowell, of Windham, and is survived by her and by two promising children. He was a delightful man, of charming manners, held in high esteem by patients and friends alike, but was an all too early victim to nervous affections of various sorts, which shortened his promising life in medicine as well as amidst humanity.

UNITED STATES CIVIL SERVICE EXAMINATION

Medical Officers

Applications for medical officer positions will be rated as received at Washington, D. C., until December 30th. The examinations are to fill vacancies in the Indian Service, the Public Health Service, the Coast and Geodetic Survey, the Panama Canal Service, the Veterans' Bureau and other branches.

The examinations are of five grades: Junior medical officer, assistant medical officer, associate medical officer, medical officer and senior medical officer.

For the Departmental Service at Washington, the entrance salaries range from \$1,860 a year for the junior grade to \$5,200 a year for the senior grade. Juniors may be promoted to \$2,400 and seniors may be promoted to \$6,000 after the six months' period of probation. Higher-salaried positions may be filled through promotion in accordance with the civil service rules. Promotion from grade to grade may also be made in accordance with the civil service rules as vacancies occur. For field branches the salaries are approximately

the same except that deductions are made where quarters and subsistence are furnished, and where part-time duty, only, is required.

Eligibles are needed who are qualified in general medicine and surgery. There is especial need for eligibles

qualified in the various specialties. Practically any specialty may be named by the applicant.

Competitors will not be required to report for examination at any place, but will be rated on their education, training and experience.

BOOK REVIEW

Review of Development of Our Knowledge of Tuberculosis. By Lawrence F. Flick, M. D. Printed by Wickersham Printing Co., Lancaster, Pa.

Medical authors have before written historical notes prefatory to subject matter, but it has remained for Dr. Flick, veteran organizer of tuberculosis hospitals and associations and Co-Founder of Phipps Institute, etc., to assemble the literature of tuberculosis in a readable and interesting volume. It is indispensable to all students of chest diseases who cannot afford the time and money to possess and to study the original writings.

From fragments possibly referring to tuberculosis in the Code of Hammurabi, 2250 years before Christ, to Morton's *Phthisiologia*, 1692, and Benjamin Rush's "Inquiry into Cause and Cure of Pulmonary Consumption," 1789, the writer has collected all the literature of tuberculosis in a scholarly review. This has been brought down to the present century, to the date of the Royal Commission Report, in 1900.

The Hebrews we know from their racial immunity must have early had tuberculosis, and in some books of the Old Testament are references to prob-

able tuberculosis, which are so allegorical as to injure their accuracy and historical value. Most astonishingly keen observations had been made six centuries before Christ in a Chinese medical treatise. Aretaeus, in about the first century of the Christian era, says: "Who is there who can have a bringing up of blood without having a terrible fear of death?" Celsus, in the first century, describes pneumothorax, details a very good operation for empyema, and mentions "tuberculosis."

Aenent "galloping consumption," Galen says: "Dry, hot temperaments invariably go to pieces with hectic fever from the start."

As recently as the nineteenth century, and up to Koch's discovery of the bacillus of tuberculosis in 1882, there is so much of error in pathology and so much of crudity in treatment that so-called authorities seem to have advanced little in centuries. Benjamin Rush, in 1815, writes: "The pneumony appears to be an acute consumption and the consumption a chronic pneumony." His treatment was blood letting in the inflammatory stage."

Laennec, inventor of the stethoscope,

who may be called the first specialist in tuberculosis, died of this disease in 1826. Many doctors, like him, have since proved that one has a greater interest in his own disease.

From knowledge of tuberculosis gained by history, Dr. Flick continues with the knowledge gained by the laboratory work of Virchow, Villemin, Pasteur and others up to Koch's discovery of the tubercle bacillus and its differentiation by Theobald Smith. He

is particularly appreciative of the painstaking investigation and accuracy of Villemin, whose work Dr. Flick feels was the forerunner of Koch's epochal identification of the tubercle bacillus.

The student of tuberculosis can ask no more interesting story than what is written by this quiet historian, student and scientist. May some public credit come to him who deserves much ere he lays down his pen.

C. B. SYLVESTER.

MEDICAL NOTES

We note that in the City of Calcutta in the month of April-May 4, there were 136 cases of smallpox, with the high mortality of 128 cases.

We are glad to know that Dr. G. C. Precourt, Secretary of the York County Medical Society, and Mayor of Biddeford, is at last recovering safely from his recent and prolonged attack of pneumonia. He is now a convalescent at his cottage at Biddeford Pines.

We have received from the State Board of Health the monthly report of births for May, including 1,224 births,

at the rate of 19 in every thousand inhabitants, and from various diseases we note 951 deaths at the average rate of 14.48 per thousand. The highest rate of deaths was 21.96, in Lincoln County, and the lowest 10.32, in Franklin County. Cumberland County had a 15.00 death percentage. The percentage of deaths was lowest in those counties with the most scattered population. We note from the total deaths that 82 were reported from influenza, 49 from tuberculosis (in all forms), and 162 from pneumonia.

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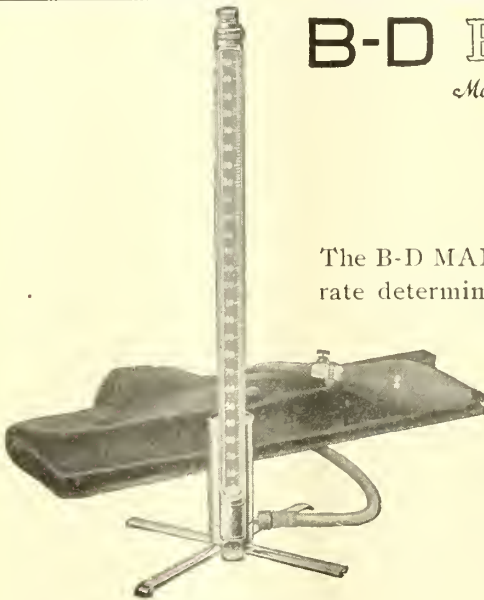
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THE JOURNAL

OF



Maine Medical Association

The Official Organ of the State and County Medical Societies

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GASTRON

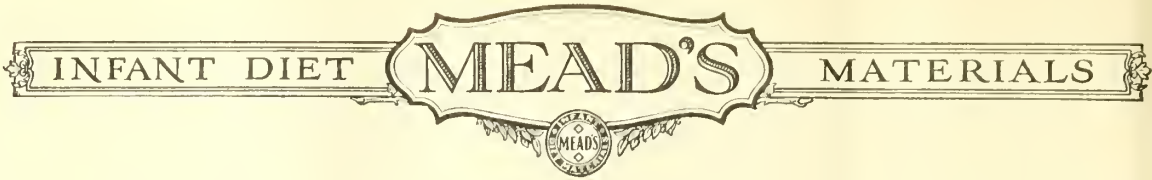
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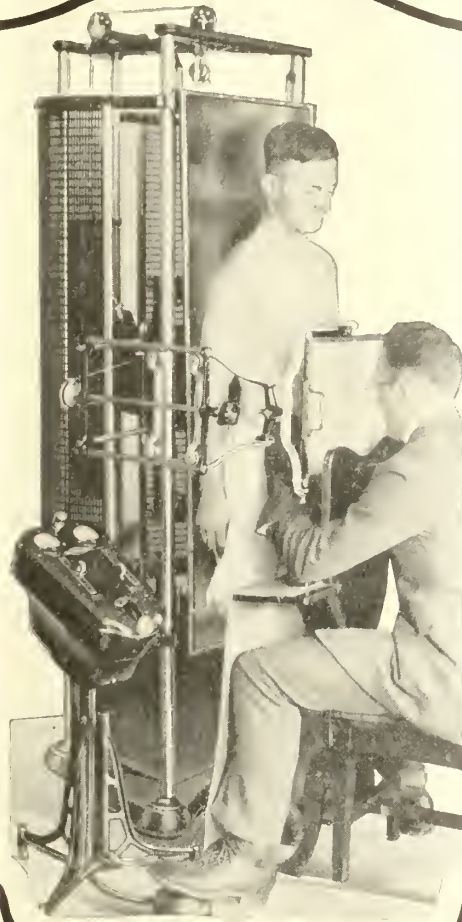
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IV

MAINE MEDICAL ASSOCIATION



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Pres.-Elect—N. M. Marshall, Portland	2nd Vice Pres.—W. J. Renwick, Auburn
Sec. and Treas.—B. L. Bryant, Bangor	

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Second District	John Sturgis, Auburn	" " 1927
Third District	Neil A. Fogg, Rockland	" " 1926
Fourth District	Geo. Young, Skowhegan	" " 1926
Fifth District	C. C. Knowlton, Ellsworth	" " 1928
Sixth District	A. K. P. Smith, Bangor	" " 1928

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York	J. R. LaRochelle, Biddeford	G. C. Precourt, Biddeford

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*THE TREATMENT OF CERVICAL CANCER BY RADIUM EMANATION.

By JOSEPH MUIR, M. D., New York City.

The first application of radium to the uterine cervix was made in this country by Abbe, of New York City. This is a fact of which we should never lose sight, and it is one which the French, with characteristically punctilious politeness, never fail to emphasize, although it was in France, and through the labors of French workers in the majority of instances, that our present technique of radium therapy as applied to the uterine cervix was developed and perfected. When we begin to trace the history of this therapy, we find that we are following the history of the development of radium therapy itself, for always this particular application of the curative powers of this element has occupied the attention of the foremost experimenters and clinical workers. When Madame Curie visited this country in 1921, the university women of the United States subscribed a sum suffi-

cient to purchase a gram of radium, as this greatest of women scientists at that time stood sorely in need of the element in order to continue her experiments. In making the appeal for contributions from American women, it was emphasized that it was peculiarly appropriate that they should make this gift, in that Madame Curie's discovery had been of more benefit to woman-kind than to any other members of the human race. In any discussion of the uses of radium therapy this particular one is certain to come in for a share of consideration, and I feel, therefore, that there is no phase of the subject to which I can call your attention, which will be of greater general interest than its application to uterine cancer.

It was in 1905 that Abbe published the short note which recorded his new use for radium. The first real exposition of its gynecologic application was

*Read before the Maine Medical Association at Poland Springs, June, 1926.

made by Oudin and Verchère before the French Académie des Sciences in 1906. These experimenters, however, had not undertaken the treatment of malignant conditions, this apparently having first been done at Tuffier's clinic, and its results reported at the Congrès International de Chirurgie, at Brussels, in October, 1908. Thus, for twenty years, French women have been able to avail themselves of the curative effects of radium in this perhaps the most dreaded disease to which their sex is subject. Workers whose names stand high upon the honor list of radium therapists—Degrais, Wickam, Cheron, Rubens-Duval and Dominici—early went on record as to the value of radium in combatting cervical cancer, and in 1913, when the "Weekly Board" of the Middlesex Hospital in London sent a committee to Paris to investigate, with characteristic British caution, the work of Madame Curie, Becquerel and many others who were rapidly extending the gynecologic uses of radium, the French lay public had already come to understand that in radium there lay a hope of alleviating and often completely curing uterine cancer.

It was two years later still that Kelly, of Baltimore, presented the results of his employment of radium treatment before two of the leading medical societies of the United States, which may be regarded as the first formal recognition of radium's powers in this particular direction, although for five or six years it had been put to practical clinical tests in many differ-

ent places. During the last decade the treatment of cervical cancer by radium in some form has become a commonplace of medical practice in this country, yet we must still look to France for the greatest advances in technique and the most lasting and satisfactory results. The favor with which radiation in cervical cancer has been looked upon in this country and in England has witnessed both flood tide and ebb. Four or five years ago, there was a decided reaction against its use, and many who had practically abandoned surgery declared that the results from radium were too uncertain, and once more resorted to the knife. But in France, faith and enthusiasm have never faltered, and as a result they have to-day reached a point where cold, unfeeling statistics demonstrate that they are able to accomplish more than surgery has even claimed.

The best known of the many eminent French technicians is probably Régaud, as he is the direct associate of Madame Curie, and, in this country at least, his name has received more frequent mention than any other. Hardly less well known, however, is Robert Proust, head of the Hospital Tenon, and his associate, de Nabias, whose work upon cervical cancer has received the widest recognition in his own country. Of the details of this work, and the methods which have found most favor in the hands of French workers, I shall speak more in detail in a moment. Before taking up this phase of my subject it seems wise to consider the effect which the application of radia-

tion in any form has upon the tissues, and the histological information which it is essential every radium worker should have at his command before he undertakes to employ this agent in his practice.

Though a large quantity of material on this subject is catalogued in the literature, when we come to examine it the fact becomes patent that, on the whole, our body of knowledge does not even yet amount to very much. Oskar Frankl, the Austrain gynecologist, several years ago made a very complete study of a neoplasm in the course of radium treatment, daily observations being made upon it over a long period of time. Though all such work was greatly hampered, or made entirely impossible, by the war, some valuable investigations were carried out at Wertheim's gynecologic clinic, in which, in days gone by, so many American gynecologists had sought knowledge and inspiration. Here, systematically controlled observations were made upon uterine neoplasms before any radiation had been applied, and a like series was carried out when these same uteri had been extirpated after having been subjected to pre-operative radiation. The labor involved in making sections of an entire uterus, and carefully scrutinizing each one, made the task a most tremendous one, and when we learn that reports were made upon eighteen cases which had been under radium treatment for a period of two months, we have a realizing sense of the extent of Teutonic patience.

In these eighteen cases the micro-

scope showed that, after surgical removal, living cancer cells were still present in sixteen uteri. This, at first thought, is not a very encouraging showing, yet in many instances the viable cells were so small that it offered the hope that, had treatment been more thorough, they would have been wholly destroyed. A translation of some of the histological findings is of interest: "In some sections the cells showed a strikingly disturbed arrangement, appearing to be loosened from their matrix. The nuclei had a decidedly marked pyknotic appearance. This was characteristic. Besides, the nuclei had a strong tendency to become confluent and to form conspicuously large numbers of giant cells. A further stage is the obliteration of the characteristic phalanx-like appearance of the alveoli in the solid form of cancer. The central masses of cells are commonly destroyed first; the marginal cells retain their vitality for a much longer period. In the cases treated by large doses of radium or mesothorium, there may appear in the same section areas of necrosis, areas of hyaline degeneration, areas of large syncytium-resembling masses, and of increased connective tissue proliferation. In other areas there may still be small rests of unchanged cancer cells. But characteristic for all these sections is the very conspicuous amount of round cell infiltration. This, however, is more in evidence in the cases treated by larger doses of radium or mesothorium and those treated for a longer time. The other anatomical structures, as, for example, blood vessels,

nerves, cervix mucous glands, appear to be for the greater part unaffected. This, it would seem, should point to a stronger resistance possessed by these tissues, on the one hand, and on the other, to a possible specific or selective influence of the radium radiation on cancer cells."

These studies were made some ten years ago, but although the methods of applying radiation have been greatly modified and improved since then, the results, given the same time and intensity factors, have remained perfectly constant, in so far as histological effects are concerned. More recent work done in Vienna by Frankl and Americh has, however, extended and amplified these earlier observations. For their experiments a malignant neoplasm of the papillary type, with small densely packed cells and extensive involvement of the stroma, was selected, sections being taken at intervals from both crater and periphery. Three days after the first radiation extensive vasenlarization was discernible at the center, with the formation of edematous lacunæ, though many of the carcinomatous nests showed no disturbance, no changes were noticeable at the periphery. Eighty-four hours after the beginning of radiation, when a second application had been made, those cells which had come directly under the influence of the rays were much enlarged, while similar changes were now made out about the edge of the neoplasm as well, areas of edema being in evidence in many places. On the fifth day, in the most exposed areas there were enormous swellings of pseudo-papillary tissue, with dilatation of the blood vessels and the loosening of epithe-

lial cells from the cancer nests. This process was continued with more intensity over the sixth and seventh days, so that the center then contained only a few nucleated cells, with only remnants of the greatly enlarged cancer cells located there when treatment was first instituted. As treatment was continued — always by the fractional dose methods — these changes gradually extended to those areas of the growth which did not come immediately under the effects of the rays. Twenty-six days after the radiation and observation were first begun, only remnants of carcinomatous tissue could be made out, only a few cells being found in the directly rayed areas. We are disappointed to learn, however, that after forty-one days had elapsed from the beginning of treatment, "beside the altered tissue masses rapidly proliferating carcinoma cells of a type resembling those present before treatment were to be seen. The areas directly exposed to the rays showed the first changes on the third and fourth days; the influence of the rays was greatest between the fifth and seventh days; the rays were no longer effective after the fortieth day, when the genuceptors of the cells became active and caused proliferation. Areas indirectly treated were slower in showing the changes and the effects of the treatment wore off sooner."

The problems in clinical employment which arose following these revelations by the microscope have been met in different ways by the various schools of radium therapeutics. Of especial interest is the probable course of metastasis or of direct extension, and the best

means by which these can be aborted or wholly prevented has engaged the attention of gynecologists both here and abroad. Régaud and his co-workers have been especially active along these lines. How far the gamma ray is able to halt the progress of malignant extension through what the French term the *zone d'ensemencement latent* — that is, the tissues directly surrounding the area of known malignancy, which, though probably not yet directly affected, is yet in the greatest danger of invasion by the mitotic cells — has become fully as important as how to extirpate the areas already recognized as malignant. As I have said elsewhere, around the focus of radiation, which is instituted by the introduction of a tube of radium into a cancer, a zone of sterilization is produced. The extent of this zone depends upon a number of factors, biologic, physical and geometric. We now realize that we can obtain a local cure in this zone, that is, a definite arrest of the cancerous process. If we can extend the effects of our therapy so that this zone of sterilization will encompass the zone of potential malignancy as well, we can then feel sure of attaining a true cure, that is, total eradication of the disease.

The French therapists of cervical cancer have sought to accomplish these ends in several different ways. Régaud holds that the most important point in the therapy is the employment of a large number of radioactive centers, and he locates them in the cervical canal in the vagina, the parametrium, or in the rectum; he also applies surface radiation to the skin and makes use of

buried tubes in some instances. But he also gives it as a general rule that the most useful locations in the vast majority of cases are the uterus and the vagina. Whenever possible, that is, if the disease has not progressed so far as to occlude the cervical canal, the radium applicator should be long enough to fill the canal entirely. A string of small tubes enclosed in one long sheath of suitable screening material may be used, but by far the most important part of any applicator is its screen. For this purpose this French master has employed a 1.5 mm. thickness of platinum, around which is a second sheath of aluminum, 0.1 to 0.2 mm. thick. The tubes thus enclosed are then placed in still another outside container of rubber, and the whole apparatus passed into the uterine canal. When the canal is filled up with cauliflower growth, so that it is impossible to place the radium in this way, the excrescences may sometimes be cleared away by vaginal applications of radium, or, if occlusion is complete, resort to what is termed "radium-puncture" may be necessary, that is, the implantation of bare tubes of radium emanation, or radium needles, until such time as the entrance to the canal is sufficiently patent to permit of the regular cervical applicator being employed.

Régaud roundly condemns the method of fractional dosage. The importance of exact estimation beforehand of the amount of dosage to be given and its use at a single application is emphasized throughout everything he has written on the subject. In a period of four or five days, he regards 0.4 to 0.5 milli-

curies per hour of emanation, until the required dose of 40 millicuries is attained, as amply sufficient. Six centers of radioactivity should be arranged, each giving off 0.45 mc. per hour, which is brought about by the employment of three tubes, of a value of 100 mc. hours each, the content being either 6.66 milligrams of radium, or its equivalent in emanation, together with one 50 millicurie hour tube holding 3.33 milligrams of element. This requires in all 60 mgr. of radium element, and this should be left in place for eighty-nine hours, in order to give a total dosage of 40 mc. destroyed.

Proust has pointed out that there is a definite limit to the amount of dosage which can be applied to the vagina, and that this limit should be placed at 6,000 mgr. hours or about a decay of 45 millicuries. He obtained favorable results from making a 100 hour application, using 60 mgr. of radium. This was so divided that 30 mgr. was placed in the uterine cavity and a total of 30 mgr. in the vagina, this last amount being divided so as to lie at several different points. Sometimes 40 mgr. is placed in the uterus and only 20 mgr. in the vagina. Stronger filtration is necessary in the vagina than in the uterus, and if there is any malignant invasion of the recto-vaginal septum or in the rectal region, no radiation of the vagina should be attempted.

In my own work, I have followed along the general lines laid down by the French gynecologists, who have practically abandoned surgery in favor of radiation for the treatment of cervical

carcinoma. In France, the use of emanation has been everywhere substituted for the element itself, in so far as the radium technicians of that country have been able to supply it. It seems unnecessary for me to bring forward any arguments as to the advantages which emanation offers over radium salts in nearly every situation to which therapeutic emergencies may make it desirable to apply radiation. The greater flexibility of emanation, its relatively low cost, and the ease and safety with which it may be handled are too well understood to need rehearsing. Making use of this form of radiation, we have gradually built up a special technique for the treatment of cervical cancer which combines all the advantages of the French methods, while at the same time it eliminates some of the drawbacks which have been urged against following the Continental plan, rather than that which has been developed on this side of the Atlantic.

The three cardinal principles of this therapy are:

(1) Rigorous asepsis: (2) proper distribution of dosage—the highest possible which can be applied without injury to the surrounding normal tissues, and (3) the avoidance of necrosis by proper filtration. Whenever we are able to comply in every detail with these requirements, we feel confident that the patient will be afforded every aid which radiotherapy can give to her particular case, and even if the application of the treatment has been so long delayed as to make cure impossible, she will still get the benefit of the utmost palliative

measures known, and many of the most revolting and terrible features of her disease will be alleviated or entirely eliminated.

The radium therapist should at all times conduct himself exactly as he would were he a surgeon undertaking a major procedure. A most thorough preliminary examination must be given every candidate for radium treatment. The condition of kidneys, bladder and rectum must be fully explored and function carefully tested. Unless the organs of elimination are capable of coping with the extra strain which the destruction of the neoplasm is likely to put upon them, any benefit which may be obtained from the treatment is likely to be overbalanced by the failure of the viscera at the crucial period of the disease.

Rigid asepsis must be observed throughout. Not only must the external genitalia be shaved and disinfected exactly as for a hysterectomy or other gynecologic procedure, but throughout the treatment the applicators must be removed daily, thoroughly cleaned and sterilized, and replaced with exactly the same care as was used at the outset. A single moment's neglect may mean failure of the entire procedure, so the importance of the radium therapist keeping everything under his direct personal supervision cannot be too much emphasized. In late cases, preliminary radiation may be necessary in order to open up the cervical canal. For this purpose I implant bare tubes, using a number of centers of radioactivity of small individual strength, distributed

as accurately as possible throughout the fungating mass. Such preliminary "seeding" will usually clear away the occlusion of the canal and make possible the insertion of our specially designed applicators. This may sometimes be done without dilatation of any kind, but in the majority of cases it will be necessary to enlarge the canal somewhat before such insertion is possible. It cannot be too strongly urged upon anyone undertaking to apply this treatment, that any attempt to dilate a carcinomatous cervix must be made with the greatest caution, for malignant tissue is very friable and if ill-advised efforts at dilatation result in tearing and trauma, which opens up communication with the cellular tissue at the base of the broad ligament, the outcome may easily be a fatal pelvic peritonitis. Many a failure attributed to the employment of radium in cervical carcinoma has really been the result of such an accident. The only safe method of dilatation is the gradual introduction of bougies of increasing caliber, and under no circumstances should such an instrument as the Goodell dilator be employed, as these enlarge the canal to a certain dimension regardless of trauma to the tissues, and are sure to do serious, if not mortal injury.

For the requirements of our second specification—wide distribution of high dosage—we are obliged to use a relatively large number of radioactive centers, and to employ the greatest care in packing, so as to insure their proper distribution, and bring the entire cervical region, together with its *zone d'ensemencement*, under the desired raying.

Plain aseptic gauze is used for packing; iodoform should always be avoided. Two feet of gauze is first introduced toward the rectum, in the posterior vagina. The vesical area is packed off in the same way, the idea being the protection of both rectum and bladder from too close exposure to the radiation, a never-varying rule being that no adjacent viscus should be allowed to come within a distance of one centimeter from a radium applicator. More packing is put in below, so that the entire uterus is raised up as far as possible beyond the vesical and rectal areas, and finally a T-binder is applied to hold everything in position and the patient kept at rest for twenty-four hours at a time. The usual time of application is six days, the applicators being removed and sterilized as already described, and the vagina repacked exactly as at first, every day employing the most precise asepsis throughout.

By careful distribution throughout the malignant area we are able to use what many of our colleagues regard as an extremely high dosage, the entire number of millicurie hours given off in the six to ten day periods of exposure being from five to ten thousand. This is made possible by the fulfillment of our third requirement, namely, complete and adequate filtration of all radioactive centers. All danger of necrosis is avoided by using a screenage consisting of a combination of 4 mm. of platinum, which cuts off practically all the caustic beta rays, with aluminum foil, which takes care of secondary beta radiation, and an outer covering of ametal rubber. No

necrosis follows the use of radioactivity so screened, and, when properly applied, the patient is assured of getting the full benefit of the treatment with none of the complications or after-effects which so frequently offset any advantages she otherwise obtains.

The results of this form of application have proved so uniformly good that I feel confident in recommending it to anyone called upon to treat a case of cervical cancer, for remarkable results have followed its use even in cases so far advanced as to appear quite beyond the reach of any therapeutic aid. For recurrence after surgical removal, we have employed practically the same routine as that recommended for advanced primary cases. In such cases, radiation of the region of the broad ligament and parametrium is also desirable, and for this we have employed two centers of radioactivity which provided 3,000 mc. hours of radiation during an eight-day period of exposure. For recurrence in the cervical stump, the implantation of platinum radon seeds has proved very satisfactory. We commonly use six such seeds, putting them in two centimeters apart, and making use of some 2.5 millicuries of radium emanation per seed. This provides an additional 2,000 millicurie hours, making a total of 5,000 millicurie hours all told for such a recurrent case.

Radium therapy of cervical cancer has now developed to such a point that the gynecologist can feel that he has been provided with a weapon which gives him a far better chance of victory over this ancient enemy than he has

ever had before. Progress has necessarily been slow, and perfection has not yet been attained, but so much has already been accomplished that we can look forward with confidence, and have no hesitation in giving our patients the assurance for the future which in the past we have only too often had to hedge about with reservations, if we were not compelled to withhold it altogether.

History: Radium first applied to cervix by Abbe; technique developed in France, however. Of peculiar benefit to women because of its aid in cancer of cervix. Kelly did much to popularize cervical application of radium in U. S.

Histology: Examination of uteri excised after being radiated made by Frankl and in Wertheim's clinic. "The areas directly exposed to the rays showed the first changes on the third and fourth days; the influence of the rays was greatest between the fifth and seventh days; the rays were no longer effective after the fortieth day, when the genuceptors of the cells became active and caused proliferation. Areas indirectly treated were slower in showing the changes and the effects of treatment wore off sooner." Normal tissues, blood vessels, nerves, cervical mucous glands, etc., seem to be little affected, indicating selective action by the rays.

Control of extension and metastasis a

most important phase of the clinical problem. Sterilization of the *zone d'ensemencement latent*—area of possible malignant extension—has been attempted by Régaud by means of many centers of radioactivity. Details of his method. Opposition to fractional dosage. The limit of dosage possible in the vagina placed by Proust at 45 mc. destroyed.

Personal experience and plan: Follows the French ideal in general, but is improved by personal additions and amplifications. Advantages of emanation over radium element.

Three Principles: Rigorous asepsis; proper distribution of highest possible dosage without injury to surrounding tissues; avoidance of necrosis by proper filtration.

Importance of asepsis; preparation as for operation; care of applicators during treatment. Danger of dilatation.

Packing; protection of bladder and rectum. Time of application.

Size of dose; distribution of radioactive centers. Description of filtration used; applicators; total dosage.

Cleaning up occluded canal.

Treatment of recurrence after surgery; application of platinum radon seeds.

Summary of advantages which this treatment offers over that of others, with clinical illustrations if possible.

ACTINOTHERAPY WITH QUARTZ LIGHT.

By DR. CHARLES E. COOK, JR., Calais, Me.

Quartz light therapy, commonly called ultra-violet, has been coming into use of late to an extent that makes it worth while to discuss its physics and therapeutic uses and to report results of treatment by this comparatively new agent, particularly so since its effects are so definite and useful over so wide a range. My interest in it dates from a year or more ago in connection with X-ray treatment of certain skin diseases, particularly superficial cancer. I own a pair of lamps, the Alpine Sun or air-cooled, and Kromeyer or water-cooled types. There are other makes of these lamps on the market which accomplish the same purpose and are no doubt efficient. The air-cooled and water-cooled distinctions are important, as will be shown.

At the outset the writer feels disposed to do a little "crabbing" about nomenclature. We seem disposed to get off on the wrong foot by carelessly calling this really valuable agent by the name "violet ray" or "violet light." The irregulars have worried and mauled this name in the dust and very nearly discredited it. To say violet ray or violet light implies visibility, since the name of a color cannot properly be applied to a property outside the range of the visible spectrum. As will be shown, these rays occupy a space in the physics of radiation much longer than the visible spectrum. The name "violet" has been applied to these simply because they are a direct continuation downward

in length of vibration from the violet end of the spectrum. They have no color. The terms actinic or chemical radiation would be preferable because they are more descriptive. The newer term "Quartz Light" does not seem to serve the purpose exactly since the only physical property of the rays that they have in common with ordinary light is the one they also share with X-rays of acting on a photographic plate. The visible light from the quartz lamp is merely incidental to the generation of the true actinic ray, just as the visible light from a Coolidge tube is also incidental.

It is practical to obtain the actinic or chemical rays from three sources, sunshine at altitudes, the carbon arc and from the electric arc through mercury vapor in a vacuum tube made of quartz. Glass is opaque to all but the visible rays of the spectrum and a little beyond on the violet end. Solar radiation is believed to consist of waves or vibration in a hypothetical ether that pervades all space. These vibrations are not all of the same length or frequency. By spectroscopy both direct and photographic and by other means, they can be measured and the shorter ones in which we are interested here have been given a unit of measurement called the Angstrom Unit. Longer ones are measured in meters and those at present charted begin with those many meters long, the Hertzian waves of radio, wireless telephony and telegraphy.

Continuing down the scale through uncharted areas we next know the so-called infra-red or heat waves or vibrations just before the visible spectrum of ordinary light, which ranges through the seven primary colors from the visible red at 7,700 A. U. to 3,900 A. U. at the end of the visible violet, the limits of retinal sensibility. The limit of transmission by glass is reached at 3,800 A. U. Fused quartz transmits them down to 1400 A. U. Fluorspar passes them a little further down but is impractical because of its cost. These rays are known and charted down to 360 A. U. We know them again as X-rays from nine to one Angstrom Units in length. Lost again, they reappear as the beta and gamma rays of radium of small fractions of an Angstrom Unit. Somewhere below this they become the vibrations within the atom. From the above considerations it will be seen that any so-called violet ray based upon transmission through glass is impossible. This eliminates apparatus sold for the purpose of making use of the violaceous color of the high frequency current through glass vacuum tubes, and the colored glass screens over ordinary electric light bulbs. Glass enclosed solariums are also unscientific. Glass refracts the red and infra-red rays and reinforces them so that a glass enclosed space is appreciably raised in temperature when the sun is shining.

The sun is the ideal source of actinic radiation as it is of heat and light radiation. The former is available in concentration only at altitudes because

the atmosphere plus water vapor and other impurities in it absorbs most of it before it reaches the earth surface. The solar and artificial actinic radiation are identical except that the source of the artificial energy being close is many times more concentrated and controllable than the solar. The most practical source of artificial energy is the electric current arcing through mercury vapor in a quartz container or tube. These tubes are manufactured to conform to two types. The "air-cooled" burner passes radiations of all lengths down to the limit of quartz transmission. The "water-cooled" tube, due in part to the mantle of water surrounding it, absorbs the longer rays down to about 2,900 A. U. The rays transmitted before this limit are called "near" and beyond it "far" actinic radiation. There is much practical difference between the two and this difference is the basis for the distinction between air-cooled and water-cooled lamps.

Instead of using the terms "near" and "far" energy, I will use the equivalent terms, "air-cooled" and "water-cooled" lamps. The air-cooled lamp used at more or less distance from the skin has the effect of both near and far energy, but less of the far as distance is increased. The effect of these is to irritate and later to tan the skin. They produce "sunburn." They are germicidal, stimulating to such cells as they reach through: they are not deeply penetrating and the energy is rapidly absorbed by the blood, since hemoglobin seems to have a peculiar affinity for it. They stimulate the production of

hemoglobin and red cells and also in a marked degree the production of white ones. No actinic energy will penetrate blood as the hemoglobin absorbs all of it. It renders hemotoporphyrin fluorescent and brings about profound blood changes rapidly. All this produces surface changes due to the germicidal and stimulative effect, and deep ones due to the effect on the blood, notably in rickets and all types of tuberculosis. The air-cooled lamp is for general application.

The water-cooled lamp, giving only far energy, is germicidal and is built for adaptability to local application. It is used at close distance, at contact, and at contact with pressure, applied for the purpose of dehematization of tissue to allow penetration. The energy is very highly germicidal, so much so that at contact staphylococcus cultures on a slide are sterilized in one or two seconds. It will sterilize boils and other skin infections and abort them.

Both types of lamp produce a true "sunburn." This cannot go beyond the blistering stage, no matter how long continued, since the energy cannot penetrate blood. It will not penetrate interposed fabrics or even the heavier desquamation produced by itself. In most cases it is necessary to produce some degree of skin reaction in order to get results. This causes little discomfort and lasts only from a few hours to a day or two.

USES.

The therapeutic effect of quartz light is the natural result of its physiological action. Its results are as definite as

those of X-ray therapy but with a wider range of application. Results will not be had if the user is timid and afraid to excite a skin reaction. I explain to my patients that they will get a skin reaction that will be identical with sunburn and that it will follow the same course. I avoid the use of the word "burn." It is a bad word to use, especially if you are also a therapeutic user of X-ray. There is no better prophylactic for X-ray burns than quartz light, and no better treatment for a burn of any origin or degree. My interest in it began with a desire to render skin more tolerant to X-ray, and my experience leads me to believe that it approximately doubles the amount of X-radiation the skin will bear. It has its widest range of usefulness in dermatology, and I believe there is no skin disease that it will not markedly benefit through either its germicidal or stimulative effect, or both. In many skin diseases its effects are not short of spectacular. It will stimulate the growth of hair if the follicles are not entirely destroyed. It will not penetrate through hair, and it is necessary either to clip it off or apply through partings. It seems most properly applied to loss of hair from seborrhoeic dermatitis, psoriasis, favus and alopecia areata. It cures eczema of all types, either alone or with X-ray. X-ray is not applicable to the moist forms in which quartz light is most efficient. It relieves pruritis promptly. Itchiness is usually stopped by one or two applications of the air-cooled lamp. It is the Blue Ribbon "Cure" for chilblains. It is definite in

its effect on acne of all types and I have not had a case yet that has not responded promptly. Its effect on chronic ulcers of all types is pleasing to watch. I have a case of varicose ulcer, multiple, with extensive indurative eczema of several years' standing that is making a beautiful recovery. The ulcers are mostly healed; the itchiness was relieved during the first week of treatment; the swelling is all gone; the edema and weeping are dried up so there is remaining only a dry scaliness of the skin with a few healing ulcers. It should be mentioned that I used two doses of arsphenamine in this case though the Wasserman was negative.

It has a wide range of usefulness outside of dermatology. It has a profound effect in rickets and tuberculosis of all types and the various primary and secondary anemias. It is useful in genito-urinary and gynecological conditions. Wherever there is a pyogenic or trophic morbid condition of skin or mucous membrane it can be depended upon to produce results that will be gratifying. It is said to be very useful in herpes-zoster. I had an excellent result in a case of brachial neuritis. It is useful also in hay fever and asthma, the latter in connection with diathermy. It is promptly efficient in myalgia. There is considerable literature on its use in dentistry. I have had good results in several cases of pyorrhea. Folstein, of New York City, has written extensively on this phase. There is an article that should be of interest to dentists in the November, 1925, *Dental Cosmos* on its use in apical abscess. It can scarcely

be doubted that incipient or moderately advanced cases of pyorrhea can be entirely cleared up with a few applications. This is a condition where the germicidal effect of the water-cooled lamp applicators applied directly and with dehematizing pressure will produce definite results. The gums are made a little sore and this interferes in extensive cases. Also the searching out process necessary to clean up obstinate and overlooked foci will require unusual co-operation from patients.

CASE REPORTS.

Case 1 (Mrs. P., about 45 years). Seborrheic dermatitis of scalp:

This was an extremely severe case of several years' standing. Scalp covered with crusts and flakes, and hair thin and broken almost to the point of baldness. When she came to me last July (1925) her scalp was plainly visible across the room. She had tried everything and was very miserable and humiliated. She asked if X-ray treatment would be likely to be helpful. I radiated it at weekly intervals, using two m. m. aluminum filter, 18-inch distance, 6-inch back up spark, 3 to 4 m. a. for five minutes for five weeks. At the beginning her hair was coming out very rapidly. She had nowhere near depilation dosage and got no skin reaction at any time, but she finally became entirely bald except for a meagre fringe about level of ears and occiput. The scalp trouble cleared up entirely under this treatment but her scalp was bald and shiny. She telephoned one day that she was going to Boston to see some

specialist who had been recommended to her. In the meantime, I had given her one mild dose quartz light. Several weeks later she telephoned me again that she wanted to continue with the "violet-ray." I told her that the technique was to give blistering doses and that it would be uncomfortable but probably effective. She had three heavy doses with very slight results, just enough to give us both slight encouragement. When she appeared for the fourth treatment, things looked more encouraging, and from that time the hair came in splendidly. She has cut it back once at my request and now there is a thick, heavy growth all over the scalp, good, even color, and an absolutely clean scalp, with every promise that she will soon have a normal head of hair. I do not believe this patient had depilation dose of X-ray or anywhere near it. She was 85% depilated at the start and combing it out in handfuls every day. She had had no previous X-ray exposure. Incidentally, she has apparently had a perfect cure of a tendency to chapped hands, which annoyed her very much every fall and winter.

At the date of this publication she has a heavy growth of hair four inches (4") long, with clean scalp.

Case 2 (Mr. D., 27 years):

A number of previous attacks of gonorrhea and a chancreoid said to have been cured in the navy two years ago. Present trouble, a large foul chancreoid involving all one side of the gland penis with large right inguinal glands. This had been very obstinate to pre-

vious treatment for eight or ten weeks. He came to me on arrival in this city from Massachusetts early in August. I treated it with the usual means such as chlorazine wet packs, calomel ointment, antiphlogistine, etc., and in middle of September got Wasserman report two plus. He refused arsphenamine at first. After getting it reduced to a fairly healthy appearing sore a little larger than a dime, it began to get worse and I gave it one dose water-cooled lamp with quartz applicator making dehematizing pressure for one minute. The reaction was violent for about two days. It then entirely healed over within a week. He has since had three doses arsphenamine and is locally well.

Case 3 (Mrs. M., 63 years). Brachial neuritis:

This woman is very stout and heavy and lives in poor surroundings. Neuritis severe enough to keep her right arm in a sling most of the time for the past year and severe even before that. She has been a patient of mine most of that time. She has had three doses of the air-cooled lamp about the shoulder, one of them a blistering dose. She has not been on hand for treatment lately, but I went to see her a few days ago and found her using her arm freely for the first time in several months, and she said she had been sleeping lately. She did not like the blistering she got, besides which I neglected to protect her eyes during part of one treatment and she got an uncomfortable conjunctivitis from staring at the burner. She

is much improved, but it is a very severe case and she is slow to admit anything but trouble. She has discontinued other treatment such as liniments, etc., and can do her housework and is again doing some outside work.

Case 4 (Mrs. G., 58 years). Diabetic:

This case is reported to show effect of air-cooled lamp on X-ray burn of moderate severity. She had a breast condition which did not seem to be malignant, also a few patches of what I took to be psoriasis. I cleaned up both these conditions almost entirely with X-ray, but as she positively refused operation and we were anxious to do all possible to get ahead of the growth, she got more X-ray than she could stand and finally turned up with a second degree reaction which gave us considerable trouble during the latter part of the summer. Finally she was given two reddening doses with the air-cooled lamp four days apart. The X-ray dermatitis began to respond from the first, the pain and itchiness disappearing at once and the skin healing entirely within a short time. The original lesion was an induration about the size of a medium orange deep in the right breast which is all gone but a small kernel. I do not believe it was malignant, but am watching it closely.

Case 5 (Mrs. P., 35 years):

Acne and eczema about face, particularly about chin and lower cheek, over a year duration. She came with her mother who was taking post-operative X-radiation for carcinoma of breast. One application of the air-cooled lamp

for three minutes at eighteen inches. At her next visit her mother said she was all well. I asked that she return with her mother for observation. When she did come back two weeks from the date of the first dose, she was not entirely well, but tremendously improved. She was given another dose a little less severe than the first and I have not seen her since. Her mother says, she is "all right." Her mother said her face peeled "just like scarlet fever." As the use of quartz lamp will increase it will be safe to bear this hint in mind before making diagnosis of late scarlet fever.

Case 6 (Mrs. C., 42 years). Pernio:

This patient has had chilblains on both feet every fall and winter for many years with great distress from them through the cold months. Pain and itching, swelling and redness entirely relieved after the second treatment in November. No recurrence whatever up to this date, which is the middle of January, except recently a small area between two toes.

Case 7 (Master E., 7 years):

This boy, referred by Dr. Miner, came to the Calais Hospital with a diagnosis of scabies. This did not seem a correct diagnosis nor did he have chicken-pox. He was covered with papules and pustules below the waist line to the ankles, very closely set and numerous. He also had a suppurating gland in left groin which was evacuated. The skin eruption had existed for several weeks. One moderately reddening dose from air-cooled lamp

cleaned it up entirely by the end of the second day except for faintly reddish outlines of bases, no papules or pustules remaining at this time. He was given a second mild dose and went home the same day.

References:

Sampson—Physiotherapy Technique.

Enc. Britannica—Article, Spectroscopy.

Hanovia Company—Heliotherapy with Quartz Light, July, 1925.

Folstein—Dental Cosmos, November, 1925.

Plank—Physiotherapy.

COUNTY NEWS AND NOTES

Kennebec County Medical Association

The quarterly meeting of the Kennebec County Medical Association was held at the Augusta House, Augusta, Thursday evening, September 2nd.

Dinner was served at 6.30 P. M., followed by a business meeting, which was presided over by Dr. George R. Campbell, President of the Association.

The minutes of the last meeting were read and approved.

The applications for membership of Arthur H. McQuillan and J. Alfred Beard, of Waterville, Leon D. Herring, of Winthrop, and Frieda D. Lippert, of Hallowell, were received and referred to the Board of Censors.

The address of the evening was given by Dr. Charles Scudder, of Boston, Assistant Professor of Surgery at Harvard Medical School and eminent authority on fractures, on "The Operative Treatment of Fractures." This paper

was of unusual interest and of real informative value to those present. It was followed by a most interesting discussion.

The members and guests present were: Drs. George H. Coombs, O. C. S. Davies, E. H. Jackson, R. L. McKay, A. H. Sturtevant, M. A. Priest, W. H. Harris, Geo. R. Campbell, F. R. Carter and Benj. B. Santosky, of Augusta; Geo. W. Alexander and R. D. Simons, of Gardiner; Blynn O. Goodrich, H. F. Hill, A. H. McQuillan, R. L. Reynolds, Edward H. Risley, E. W. Boyer and B. P. Hurd, of Waterville; W. W. Hendee, of North Vassalboro; F. H. Badger, of Winthrop; H. E. Williams, of Mount Vernon; George E. Young and Morris E. Lord, of Skowhegan; Herbert W. Hall, of Hallowell, and Charles L. Scudder, of Boston.

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A. M. A. F. A. Davis & Co., Philadelphia. Price, \$2.00.

The idea of this handbook for social workers is to interest people in helping those who become deafened as they grow older. Many people thus afflicted lose courage in life, lose positions in which they have been making a living, and now stand in need of encouragement by instruction in lip reading, proper care from skilled aurists, and by keeping clear of quacks, who extort high pay and leave the sufferer worse off than ever.

Our idea in calling attention to this book in our JOURNAL is to inform physicians and trained nurses of the value of such social service in their practice and work. I have for years lectured to trained nurses at the Maine General Hospital, and the burden of my lecture has been, first and last, that nurses living, as it were, amongst people afflicted with diseases which might lead to loss of hearing, should urge in every instance in which even one ear becomes affected to have the patient consult a skilled aurist, for early prevention of loss of hearing may be far more beneficial than a later prolonged treatment, when the hearing has become deeply affected.

In conclusion, a book like this ought, first of all, to be in the library of every hospital, and then in the library of every physician who makes it a profession to treat the diseases of the ear, nose and throat, which may sooner or later produce a loss of hearing in every patient.

J. A. S.

BOOK REVIEW

Ears and the Man. By Annetta W. Peck, Estelle E. Samuelson and Ann Lehman, with an introduction by Dr. Wendell C. Phillips, President of the

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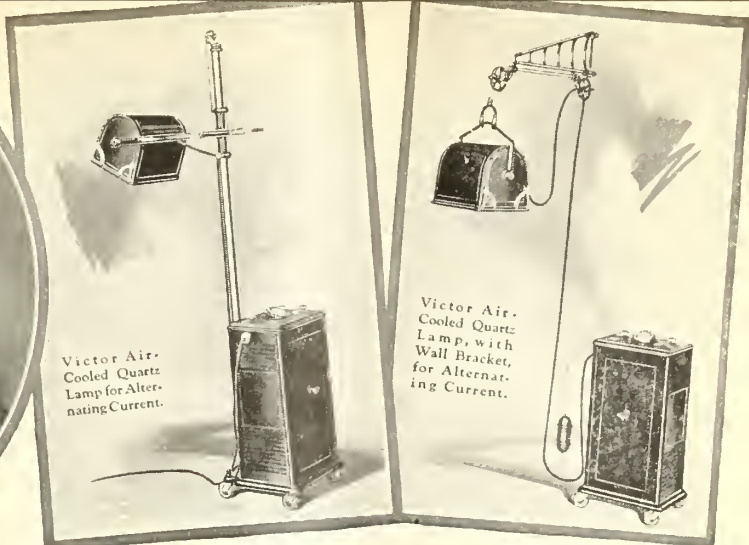
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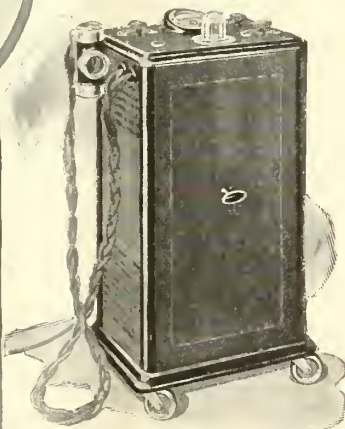
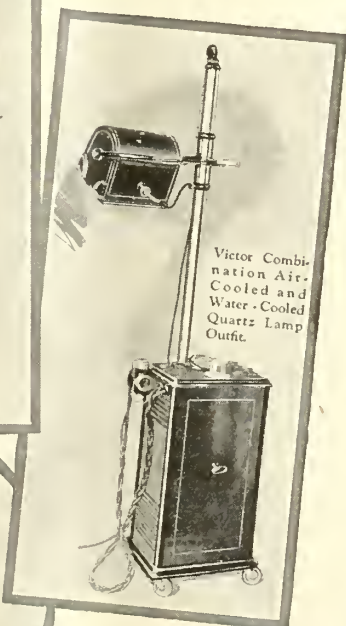
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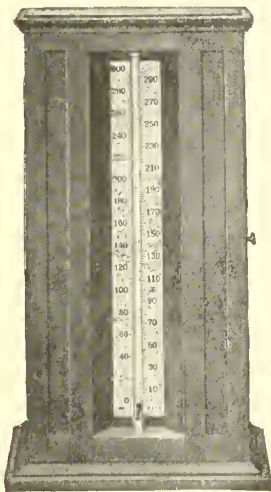
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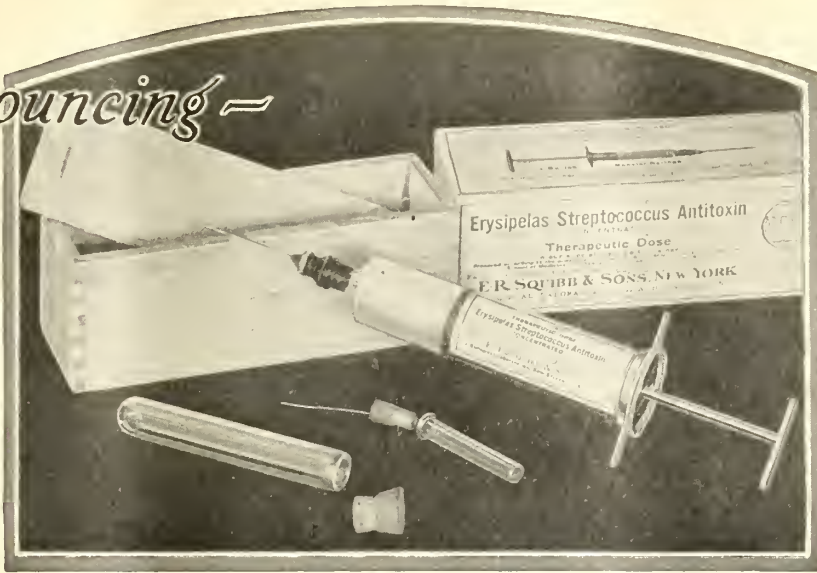


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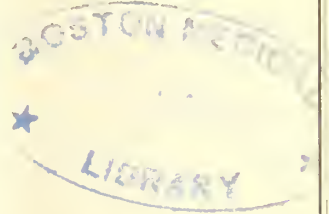
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THE JOURNAL

OF



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VOL. XVII, No. 10

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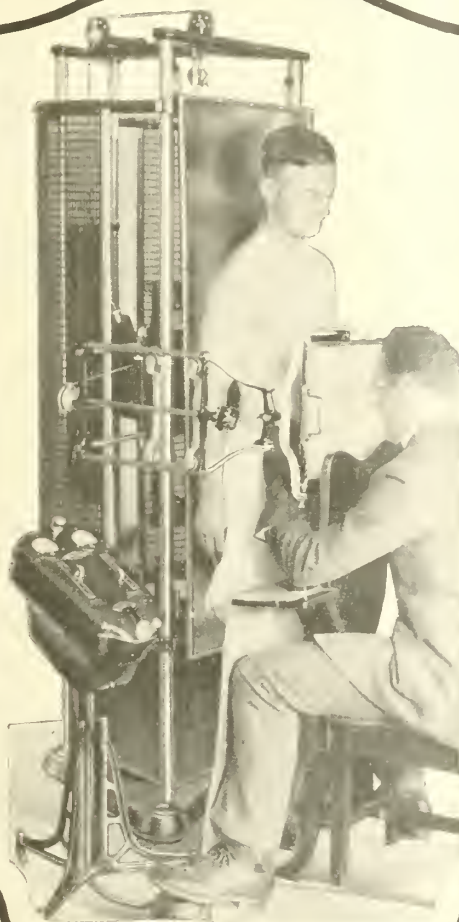
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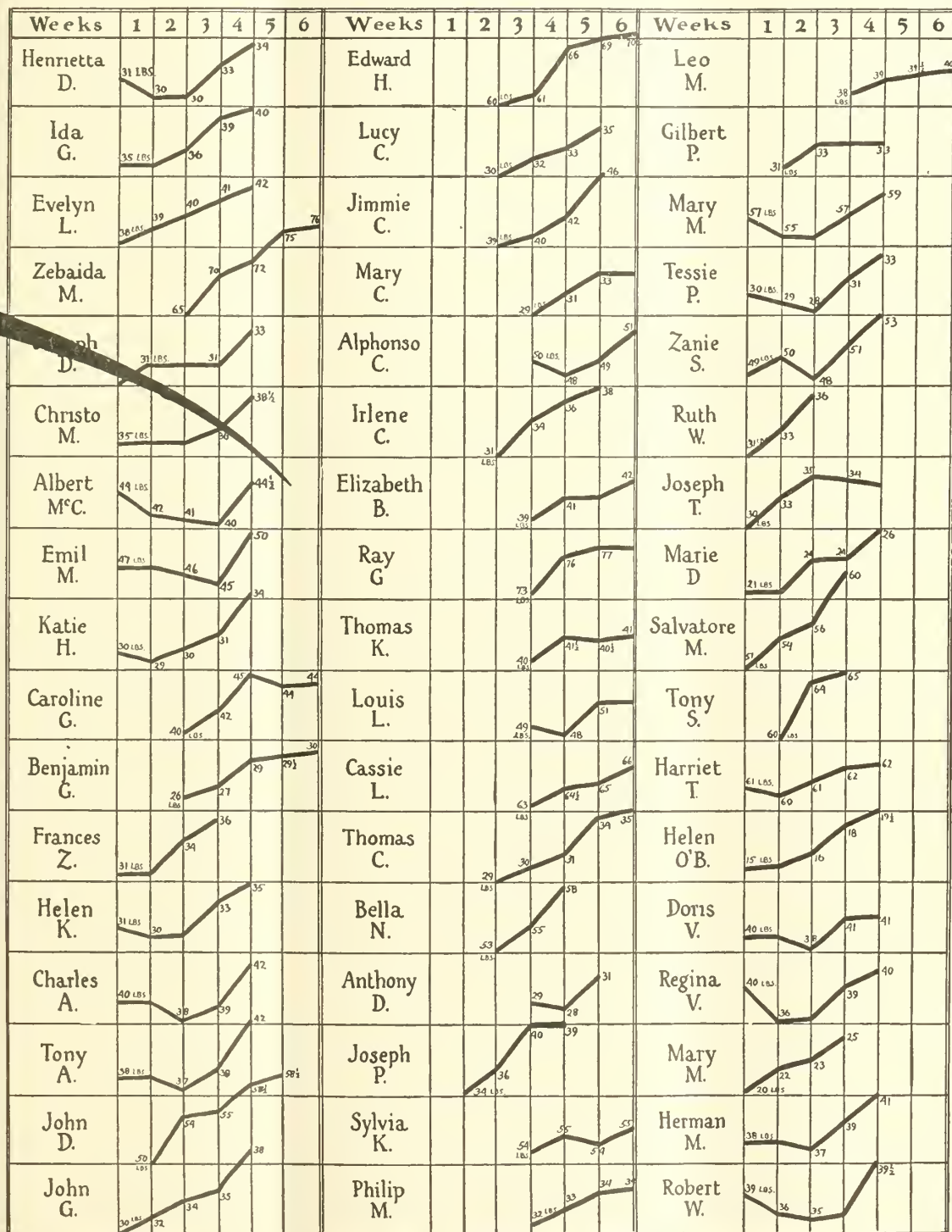
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OCTOBER, 1926

No. 10

*BLOOD COUNTS IN DIAGNOSIS

By JOHN HEWAT, M. D., Lewiston, Maine

Mr. Chairman, Members of the Maine Medical Association, and Guests:

In offering this paper for your consideration, it is necessary to explain that nothing new is to be found in it. It is simply a brief résumé of the facts and factors on which the pathologist relies when called upon to form and interpret a blood count. The excuse for offering it at this time (if any is needed) is to be found in the universal demand for a blood examination as a routine procedure and in the unfortunate fact that much misapprehension of modifying factors is still in evidence leading to misinterpretation and consequent false conclusions. If the facts herein presented should be instrumental in some measure in correcting any of these misconceptions it will have served its purpose. To appreciate the results of a blood examination at their true value, a knowledge of the composition, mode of origin and method of destruction of

the blood in health is necessary. Further, the possible reaction of the blood and blood-forming tissues to diseased conditions must be thoroughly understood. Moreover, there are certain postulates governing the interpretation of all blood counts which must never be overlooked and must always be considered. Firstly, a blood count, no matter what it shows, is of no value unless the clinical symptoms exhibited by the patients are known. Secondly, the variations in volume and composition under such physiological conditions as sex, digestion, perspiration and violent exercise must be considered. Thirdly, the variations excited by such pathological conditions, as the sweats of phthisis, the diarrhoea of typhoid, dysentery, and cholera, the increased arterial tension of uremia, the polyuria of diabetes and nephritis, the influence of the nervous system and the

*Read before the Maine Medical Association at Poland Springs, June, 1926.

exhibition of drugs, must be appreciated. Fourthly, the exhibition of an accurate technique in the use of the blood counting apparatus is a *sine qua non*.

The Composition of the Blood.

The blood is made up of the serum, the corpuscles, and the platelets. The serum or fluid element of the blood is a complex chemical substance. It contains serum albumen and serum globulin. These two elements are more or less constant and constitute about 8 per cent. by weight of normal serum. Various nitrogen-containing substances, such as urea and uric acid, are found, as well as inorganic salts, such as sodium chloride and sodium phosphate. Glucose is normally present as well as creatinine. It is evident that the serum exhibits a chemistry of considerable complexity, the study of which has in recent years come much into prominence, as the accurate estimation of the various chemical constituents of the blood has proved of much value in the diagnosis and treatment of diseased conditions affecting the various organs and tissues responsible for the elaboration and elimination of these substances found in the circulating blood.

Physical Properties of Blood Serum.

The pale yellow color is due to the presence of lipochromes or fatty pigments. The specific gravity of the serum varies from 1025 to 1030, that of whole blood is from 1059 to 1060. The variations are due to changes in the proportional amount of fluid ingested and to a less degree to the relative amount of solids present. In anemia, the specific gravity of the blood as a

whole is lowered, usually in direct proportion to the diminution in the amount of hemoglobin present. Whole blood is alkaline, due to the presence of carbonates and other salts. The coagulability of the blood is of importance in such diseases as scurvy, purpura, and the so-called hemorrhagic diathesis. In these conditions coagulation is markedly delayed. It is also delayed in the anemias, acute infective fevers and in jaundice. This question of coagulability is of some moment when surgical measures are contemplated on patients suffering from any of these diseases.

The Formed Elements of the Blood.

The red blood corpuscles, the leucocytes, and the platelets present considerable variety in form and composition. The erythrocytes or red blood cells are small, round, bi-concave discs which contain the hemoglobin or red coloring matter. When fresh the corpuscles are extremely elastic and rapidly return to their normal shape even after much distortion. Except in fetal life and just immediately after birth, the red blood cells are not nucleated when they enter the general circulation from the bone marrow where they are formed. In size the red blood cells measure 7.5 μ to 8.5 μ in diameter. In the adult healthy male they number about 5 to 5½ million per c. m. m. and about half a million less per c. m. m. in the female. They are increased in plethora and reduced in anemia. Variations in size of the erythrocyte may occur in disease. The general term used to include all such variations is anisocytosis, but to specify

particular variations in the individual cells other terms are used. Thus abnormally large red blood cells are termed megalocytes, abnormally small red blood cells are termed microcytes, while those of normal size are termed normocytes. Red blood cells of corresponding dimensions which still retain their nuclei are known respectively as megaloblasts, microblasts and normoblasts. To describe some cells very large in size, found as a rule in anemias of the pernicious type, the name giantocyte is used, and if still nucleated, giantoblast. Normoblasts, nucleated red cells of normal size, are found physiologically in the bone marrow, but they are only found in the general circulation after they have lost their nuclei and become normocytes. The presence of normoblasts in appreciable numbers in the circulating blood is always an indication of some pathological condition upsetting the hemopoetic functions of the body. Megaloblasts, nucleated red cells large in size and having a somewhat primitive nucleus, are found normally in the circulating blood during intra-uterine life and for a few days immediately succeeding birth. After this period they are to be regarded as pathological if found in the general circulation. Their presence in the circulating blood in extra-uterine life is indicative of a profound anemia, usually pernicious in type, or an anemia simulating pernicious, which is due to the presence of some intestinal parasite *dibothriocephalus latus* or *ankylostoma duodenale*. Degenerative phenomena are frequently present in the red

blood cells. Thus, for example, the cells may become markedly distorted. Such distortion is termed poikilocytosis and the corpuscle so distorted a poikilocyte. Fragmentation of the corpuscle, another degenerative phenomena, is self-explanatory, which may in some measure explain the production of microcytes or abnormally small red cells. This may be true, in part, but unquestionably many of these microcytes are derived from parent microblasts found in the bone marrow under certain diseased conditions. Color changes in the red cells are most commonly the result of a variation in the amount of contained hemoglobin. Thus, when the amount of contained hemoglobin is diminished in each cell, the number of cells being only slightly, if at all, decreased per c. m. m., the color index will be below unity. On the other hand, when the total number of red cells is markedly diminished, the hemoglobin content of each remaining cell may be increased, giving a color index above unity, a point of importance in the differential diagnosis of the type of anemia present. Under some conditions of disease, red blood cells stained with one of the commoner blood stains do not show the usual bright red coloration: instead, they are of a dirty, blue-grey color. This condition is termed polychromatophilia and is capable of two explanations: One, where the condition is the result of a degenerative change occurring in mature, fully-developed erythrocytes, the result of the action of some toxic substance. Secondly, where the phenomenon is a sign of immaturity, the red

blood cells being rapidly and imperfectly formed in the bone marrow and finding their way into the general circulation before having received their full complement of hemoglobin. That such must be the case is evidenced by the fact that in diseases where normoblasts, nucleated red blood cells, find their way into the circulating blood many of these normoblasts exhibit this same phenomenon of polychromatophilia. The red blood cells often exhibit minute blue staining dots in their substance, a degenerative change found most markedly in the blood of those suffering from malaria, pernicious anemia, and from anemias secondary to the organic poisons, such as lead, arsenic, etc.

The Leucocytes or White Cells.

In addition to the red cells there are in every c.m.m. of blood under normal conditions some 6,500 to 8,000 cells containing no hemoglobin and having nuclei. These are the white cells or leucocytes. They are of various varieties, sizes and characteristics. Some are about the same size as the red blood cells, others are half as large again; some have power of amœboid movement and phagocytosis, others have not. Of the various varieties the finely granular neutrophil polymorphonuclear leucocyte is the most numerous, constituting from 60 to 75 per cent. of the white cells under conditions of health. These cells have a nucleus which is divided into lobes or segments, each segment being connected by a delicate filament of chromatin. The cytoplasm contains numerous irregularly shaped

fine granules, which stain faintly with eosin. These leucocytes are actively amœboid and phagocytic, in which process of phagocytosis they are actively concerned with the destruction of bacteria. In the majority of bacterial infections these cells are increased in numbers, the condition being termed polymorphonuclear leucocytosis or inflammatory leucocytosis proper. Coarsely granular eosinophile leucocytes comprise 2 to 4 per cent. of white cells found in normal blood, and in stained specimens exhibit coarse, highly refractile granules, which stain brilliantly with eosin. These are very fragile cells and break down easily. They are sometimes markedly increased in disease, due to animal parasites and in skin disease. Next to be considered are the leucocytes having a single nucleus, the mononucleated series. These are divided as follows: First, the lymphocytes, cells with a large darkly staining nucleus and scanty cytoplasm, in which a few small basophile granules can be seen near the periphery. These cells constitute about 25 to 40 per cent. of the white count in health. Secondly, the hyaline or mononuclear cells. These are present in small numbers, in health. In their general character they resemble the large lymphocytes. They are described as having an oval or kidney-shaped nucleus, which stains less intensely than that of the lymphocyte and cytoplasm, which is devoid of granules. It is often difficult to differentiate these cells from the lymphocytes. About one-half per cent. of the leucocytes are characterized by the presence of larger

or smaller frankly basophile granules. These are the mast cells, and they may be degeneration products of other cells. The blood platelets are small, rounded or somewhat oval bodies derived from the megaloblasts of the bone marrow. They are extremely adhesive structures and play a very important part in the formation of thrombi and vegetations found on the heart valves. Such, then, is, in brief, a description of the elements constituting the blood. A short consideration of the origin and formation of these various elements is necessary. It is no doubt true that the endothelial cells lining the vascular channels, lymphatics and serous surfaces are the source of origin of the large mononucleated cells. It is also a fact that the lymphatic glands and the adenoid tissue of the spleen, intestine, omentum, etc., are the tissues chiefly concerned in the manufacture of lymphocytes. Apart from these, however, in extra-uterine life the majority of the formed elements of the blood have their origin in the bone marrow. Hence it is imperative that the varieties and functions of this important tissue should be understood.

Early in fetal life the medullary cavities of the bones are filled with a tissue composed of cells mucoid or myxomatous in type, possessing numerous branching and interlacing processes which later develop into the adenoid reticulum or connective tissue framework of the marrow, in the interspaces of which appear, about the fourth month of fetal life, the hemopoetic cells proper. By proliferation of these cells is formed the red lymphoid, or formative bone

marrow proper. In this marrow, except in fetal and perhaps early infant life, when the liver and spleen still retain some of their primitive hemopoetic functions, are developed all the red blood cells, the majority, if not all, of the granular leucocytes and possibly some of the non-granular white cells. In the infant and young child this type of marrow is found throughout the interior of the entire osseus system, but as age advances, in certain situations, especially within the central parts of the shafts of the long bones, the red marrow tends to undergo a process of physiological degradation, the hemopoetic cells entirely disappearing from large tracts of the tissue, to be replaced by a development of fat within the connective tissue cells of the adenoid reticulum, thus forming the yellow or fatty marrow. Usually, however, some of the blood-forming cells remain, towards the periphery of the shaft and especially towards the ends of the long bones, a point of extreme importance, as it is from these cells that proliferation may again take place should there be any special demand for the production of blood cells. In the short, irregular and flat bones, especially the sternum ribs, vertebræ and cranial bones, the red marrow undergoes a much less degree of this fatty change, though even in these situations there is a progressive increase in its amount. It is evident, therefore, that there is in the red, as well as in the fatty marrow, a potentiality for the proliferation of the blood-forming elements and a corresponding diminution

or absorption of fat cells should there be at any time a demand for an increased production of such blood cells as are formed in the bone marrow. Thus the fatty marrow formed as above described retains in its substance potential areas in which the development of blood-forming cells can be carried on, should there be any special call for these cells to combat disease or to replace cells destroyed by disease.

It follows that, if for any reason degenerative changes have occurred in the marrow which have destroyed these potential areas, and there should arise a sudden or prolonged call for blood cells, the marrow could not fulfill the demand, with results disastrous in the extreme. Thus it may happen in old people, or even earlier in life, under pathological conditions the connective tissue elements of the marrow may be found proliferating at the expense of the more highly endowed and therefore more easily destroyed functioning cells of the part. Such a pathological change would obviously produce fibroid marrow. Again, in old age, following chronic debilitating diseases accompanied by anemia, for example, cancer, tuberculosis, etc. In acute diseases, such as endocarditis, pneumonia, septicemia, etc., the bone marrow is converted into an inert jelly-like mass. This is the well-known gelatinous degeneration. It may attack both red and yellow marrow and seems particularly prone to supervene in those marrows which have undergone a prolonged leucoblastic transformation, and in which the strain cannot be maintained. It is important to remember

that this degenerative change can be produced artificially by the exhibition of certain drugs, such as lead, arsenic and mercury, which at first appear to stimulate the hemopoetic functions of the marrow, but prolonged application or excessive doses may bring about profound gelatinous degeneration accompanied by complete disappearance of the blood-forming cells from large areas of marrow tissue. Given, however, there is no degenerative change in the marrow, under the stimulus of disease the marrow may show rapid proliferative changes, and according as the change is characterized by the increased production of red or white cells the reaction is described as erythroblastic or leucoblastic in type. In health there is, of course, a normal balance between these two processes, and usually when the tissue is first stimulated to proliferate there is increased production of all varieties of marrow-formed cells. Soon, however, the marrow is found to produce more particularly the kind of cells for which there is special demand and the reaction becomes either erythroblastic or leucoblastic in type.

Leucoblastic Marrows.

Corresponding roughly with the different types of leucocytosis observed clinically, the leucoblastic changes found in the marrow may be divided into four groups: (1) the neutrophilic leucoblastic reaction. This type is found in connection with an inflammatory leucocytosis, that is, an increased production of the neutrophil series of cells, a condition found in the majority of acute infective processes, whether

these be general or local. The results produced in the marrow are to all intents identical in both sets of cases, differing rather because of the intensity, quality and amount of the irritant rather than on account of its special point of attack and distribution in the body. This type of reaction is, of course, most readily produced in the red marrow, which shows an increased proliferation of the cell required; in this instance, the neutrophilic myelocyte the forerunner of the polynuclear leucocyte. But if the demand is heavy and the red marrow unable to supply the demand, the change spreads into the yellow marrow, wherever it is situated. This change spreads from the few remaining hemopoetic cells left when the red marrow underwent its physiological degradation. But if for any pathological reason this leucoblastic reaction is prevented from taking place, from fibroid or gelatinous degeneration, then may be seen an acute inflammatory disease such as pneumonia or septicemia, exhibiting not only an absence of leucocytosis but even a diminution of the leucocyte count below the normal. Needless to say, such a condition is of grave import and invariably fatal. The remaining leucoblastic reactions of the marrow are of less importance and require but brief mention. Eosinophilic leucoblastic marrows are characterized by special proliferation of Eosinophilic cells. Hyaline leucoblastic reaction is characterized by the production in numbers of the premyelocytes or myeloblasts, the forerunners of the granular series of cells. It is found in cases where the leucocytosis has been

very prolonged, for example, in the septicemias and pyemias and the so-called acute lymphatic leukemia. The erythroblastic or red blood-forming marrows are divided into two main types. Firstly, the normoblastic, that is, marrows which produce the normal nucleated red cells lost in severe hemorrhages and in secondary anemias. The second type of erythroblastic marrow is termed the megaloblastic, where a more primitive type of red cell, the megaloblast, is developed. This is a cell abnormally large and possessing a nucleus exhibiting a more primitive construction. These cells are increased in number in many acute and chronic diseases, although the increase may be only slight. But there is one group of diseases in which the marrow exhibits the most extreme degree of megaloblastic change. This is pernicious anemia and those anemias simulating pernicious anemia due to intestinal parasites. The bone marrow has other functions, however, than the maintenance of the corpuscular elements of the blood; it is an important hemolytic area where corpuseles which have outgrown their utility are destroyed. It is also engaged in the formation and absorption of bone as well as performing functions in relation to general nutrition.

Following this brief résumé of the origin and formation of blood cells and the relation of the bone marrow thereto, conditions leading to a marked increase in the number of white cells in the blood fall to be discussed. An increase in the number of leucocytes is termed a leucocytosis. Clinically, a leucocyto-

sis may be physiological, therapeutic or pathological. As examples of the first type the leucocytosis of digestion may be cited (fifteen thousand), the leucocytosis of the new born (fourteen to twenty thousand), the leucocytosis of pregnancy (eleven to thirteen thousand) and that following parturition, violent exercise, etc. Therapeutic leucocytosis may result from the exhibition of such drugs as the salicylates, potassium, chlorate, chloroform, thyroid extract, bone marrow, etc. Leucocytosis produced by disease is most frequently and perhaps most importantly an accompaniment of the majority of inflammatory and toxic diseases. It is found in general conditions, such as pneumonia and diphtheria, but also when the lesion is localized, for example, in local inflammatory and suppurative conditions, such as abscess, appendicitis, etc. Exceptions to this general rule are to be found, however. Leucocytosis is absent in typhoid fever, influenza, measles and tuberculosis. If a polynuclear leucocytosis should supervene in patients affected with one of the above diseases, the presence of some complication such as pneumonia, suppuration, etc., is to be suspected. Pathological leucocytosis is found in parasitic skin and intestinal diseases, in poisoning with coal gas, lead, etc. Terminal or ante mortem leucocytosis has been frequently observed in patients who are moribund. It is apparent that some irritants when they invade the body have the power to attract leucocytes to them. This phenomenon is termed positive chemiotaxis, while, on the other hand, other irritants

do not appear to possess this power, which may explain the absence of leucocytosis in the acute diseases above mentioned. The type of cell increased in leucocytosis in the great majority of inflammatory and allied cases is the cell of the polynuclear neutrophil series. This is the well-known polymorphonuclear leucocytosis. The number of these cells, and also their degree of development, depends upon various factors, more especially upon the nature, quality, intensity and duration of application of the causal irritant, also upon the age and vitality of the patient and the healthy condition, or otherwise, of the bone marrow. Where the demand is moderate and the patient in previously good health, the leucocyte count may number, say ten, twelve or fourteen thousand. A more serious call, if perhaps the patient's resistance is lowered, may show eighteen to twenty thousand, while in severe cases, say of appendicitis or pneumonia, the count may be twenty-five, thirty or forty thousand. In cases where the resistance is low the leucocytes may be sixty or seventy thousand, or more, but if the bone marrow is incapable of response, from whatever cause, there may be even little rise or even a diminution: thus in the most severe cases the reaction may be excessive, it may be deficient, or it may be absent. In the milder forms of leucocytosis the cells are mature and fully developed. As the call becomes more severe, immature polymorphs or even intermediate myelocytes may be found. An increase in the lymphocyte series—termed lymphocytosis—is found

in infancy and in childhood, the lymphoid tissue being particularly active at this period of life. An increase in the lymphocytes is usually found in whooping cough, rickets and congenital syphilis. Eosinophilia. These cells are, as a rule, increased in parasitic diseases, in skin diseases, and some forms of asthma. Eosinophils, as a rule, however, are diminished or disappear from the blood in most inflammatory and septicemic diseases. Thus in pneumonia their reappearance in the blood at or after the crisis is usually regarded as a favorable sign. While the above constitute the commoner forms of leucocytosis directly traceable to the operation of some definite cause, there is another group of disease causing profound changes in the blood in which the causative agent is quite unknown. These diseases affect both the red and white cells, and as an example of a disease resulting in increased white cell production the condition termed splenomedullary or myelogenous leukemia may be cited. The etiological factor is not known. The white cells of the blood are enormously increased up to 100,000, 150,000, 200,000, 500,000, 600,000 per c. m. m. The number varies from time to time as temporary remissions and relapses occur. The variety of cell increased is the granular series, that is, the polynuclear neutrophils, the eosinophils and the mast cells, as well as the marrow cells from which they are derived. The blood itself is more watery in consistence, the hemoglobin content is lower, the coagulation time is usually delayed. As regards

the white cells, examination shows every variety of cell in the neutrophil series, from the large early myelocyte of Cornil through the intermediate myelocytes and immature polymorph cells down to the fully developed or adult polymorph cells. Eosinophil cells and mast cells are markedly increased. The red cells become progressively decreased as the disease progresses down to 3,000,000 or even as low as 1,000,000. Nucleated red cells may be seen — degenerative changes indicated by the shape of the cell; anisocytosis and poikilocytosis are also exhibited. In the bone marrow the reaction is essentially leucoblastic, with increased production of the granular series of cells, the neutrophil, eosinophil and basophil. The activity of the red marrow is enormously increased and the fatty marrow is transformed into actively functioning hemopoetic tissue. To the naked eye the marrow presents a puriform or pus-like appearance, due to the enormous numbers of white cells present. On microscopic examination the marrow shows an enormous increase in neutrophil myelocytes especially, but also in eosinophils and mast cells. In fact, the marrow has responded to the excessive demand by converting every possible element into functioning hemopoetic tissue for the production of the leucocyte series of cells. Red cells are not produced, hence the ever-increasing anemia.

The second example of a blood disease in which the etiological factor is quite unknown, and which is characterized by a marked diminution of the

cells present, the disease known as primary pernicious anemia may be cited. This disease is usually insidious in onset, and is characterized by typical changes in the blood and bone marrow, and by definite clinical symptoms, such as a lemon yellow color of the skin, digestive and nervous phenomena, hemorrhages, etc. The etiological factor is not known, though various theories have been advanced to account for the condition, such as oral sepsis, intestinal intoxication, etc. This disease can be closely simulated by the anemias due to intestinal parasites, and by anemias due to cancer, syphilis, malaria and the administration of poisonous drugs, though it is usually possible to differentiate these by a careful examination of the blood. The blood is pale and watery, its specific gravity is lowered, coagulability much diminished. The red cells show a great and progressive diminution in numbers, sometimes even below 1,000,000 red cells. The cells do not tend to form rouleaux. Poikilocytosis is a marked feature of the disease, as is also great alteration in size of the corpuscles. Microcytes, small red cells, are constantly present, but the abnormal red cells most characteristic of the condition are megalocytes and megaloblasts—large red cells nucleated and non-nucleated—the latter after fetal life are found in appreciable numbers in the general circulation only in this condition. At times some of these nucleated and non-nucleated red cells are so large that the terms gigantoblasts and giantocyte have been applied to them.

Degenerative changes are frequently found, for example, polychromatophilia, punctuate basophilia, and granular degeneration. Although the total amount of hemoglobin present may fall very low, down to 20 or 30 per cent. of normal, the amount per corpuscle may be not only normal, but may be even increased, so that a color index above unity is frequently encountered. The leucocytes are diminished, as a rule, owing to the energy of the marrow being directed towards the production of cells of the erythrocyte series. The blood platelets are decreased, as a rule. In the bone marrow the changes are chiefly in the nature of an erythroblastic reaction, usually pronouncedly megaloblastic. Myelocytes and the other cells of the leucocyte-forming series are usually much diminished, although the capacity for leucoblastic transformation is retained, and may show itself should a pneumonia or some other leucocyte-producing disease supervene. The fatty tissue of the marrow disappears and the whole marrow becomes very red in color and has been likened to red currant jelly. Bone is even absorbed to allow of the production of more hemopoetic tissue. Thus it is evident that the marrow is devoting its whole energy to a futile attempt to meet the insatiable demand of the body for cells of the erythroblastic series. The disease is always fatal, though remissions for longer or shorter periods are the rule.

In conclusion, no attempt has been made or could be made in a paper of this sort to discuss fully and at length the pathology of the blood. It is hoped,

however, that sufficient has been said to demonstrate the fact that the blood count is not merely a collection of figures capable of only one interpretation. An attempt has been made to show the paramount importance which a full knowledge of the clinic data must have in the reading of the blood count. It is hoped that the bearing a knowledge of the physiology of blood formation and destruction has on the interpreta-

tion of the blood count will be appreciated. It is also hoped that the possibility of variations in the blood count due to pathological changes in the blood-producing tissue will not be forgotten. And finally, it will be evident that the blood count, properly made and properly interpreted, remains one of the most important factors in the diagnosis of disease.

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NOTICE

Travel Study Club of American Physicians.

At the completion of its recent European Study Tour, the Travel Study Club of American Physicians elected Dr. Fred H. Albee, of New York, as President, Drs. Edward B. Heckel, of Pittsburgh, and John P. Lord, of

Omaha, as Vice-Presidents, and Dr. Richard Kovacs, of New York, as Secretary.

Plans are being prepared for the next study trip, including the Central European countries, Germany, Austria, Czechoslovakia, Hungary and Italy.

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Dr. C. A. Moulton, Hartland, Chairman Committee on Public Relations

Dr. E. H. Risley, Waterville, Chairman Cancer Committee

Dr. Thomas A. Foster, Portland, Chairman Scientific Committee

EDITORIAL COMMENT

Physicians' Home Endowment Fund

We have received from the trustees of this fund the prospectus of a plan by which it may be increased by physicians who feel inclined to subscribe for a new "History of the Physician," much on the plan of other "Outlines of History" well known to our readers. The trustees request subscriptions for this work at a minimum of \$15.00, and in asking this moderate sum they mention additional subscriptions already received for the same book, rising in some instances to the figure of \$500.00 and more. This "History of the Physician," through the ages, will be illustrated, and composed by our ablest medical writers under a skillful editorial board. It ought to be a success, and when we recall the generous purpose for which it is to be written it should deserve and will obtain a national medical fame.

This great work will be divided into five books, the first to contain fifteen chapters on medicine from the time of primitive man down to the specialization of modern days, with hints of what the physician of the future will be. The second book will be devoted to the greatest physicians from ancient days down into our own. In the third book we shall be informed of the lives and

careers of the greatest specialists in all diseases in every nation of the world. Book four will treat of hospitals, public and private; health and accident insurance; Roger Bacon, the famous philosopher; the doctor in literature and the doctor in science. Finally, in book five, we shall be able to make acquaintance with the distinguished physicians of the present age, in twenty chapters.

What a treat in medical literature is thus promised to its readers, and how fascinating yet simple a means of giving to a very worthy charity. For who that has ever seen the aged and the prematurely worn-out physician, stranded without a practice along the road to eternity, or who has been unable to save from a practice of moderate size, or who has accumulated money by hard work but lost it through poor investments, can think of such men and not wish most anxiously to help them along with the small sum asked for the subscription to this national medical work.

We shall report progress in this fund from time to time, and say now, as a starter, that those wishing to lend a helping hand can send their checks to The Physicians' Home, Inc., twenty-second story Times Building, Forty-second St. and Broadway, New York.

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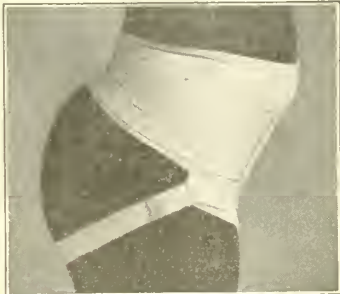
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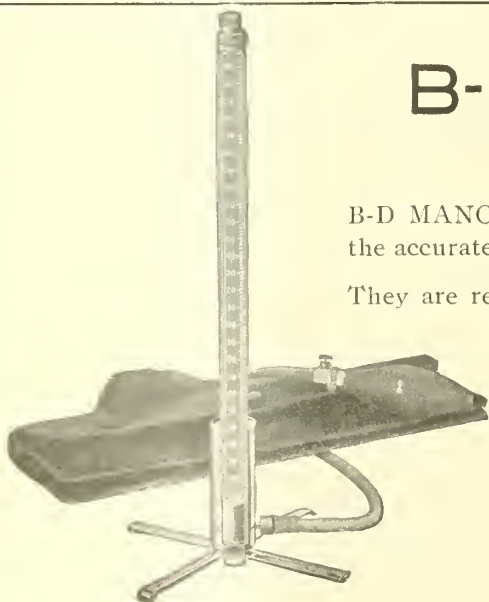
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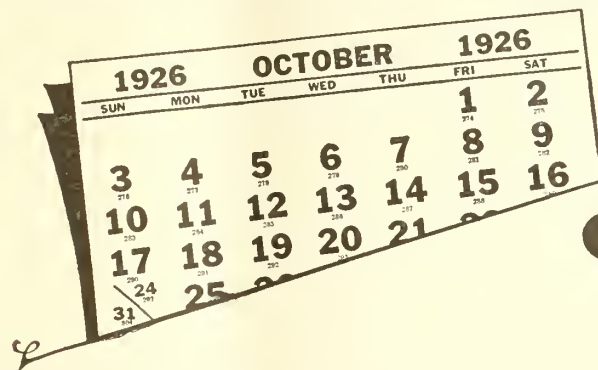
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The Official Organ of the State and County Medical Societies

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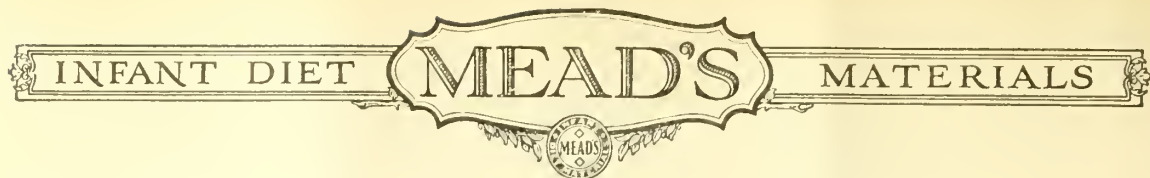
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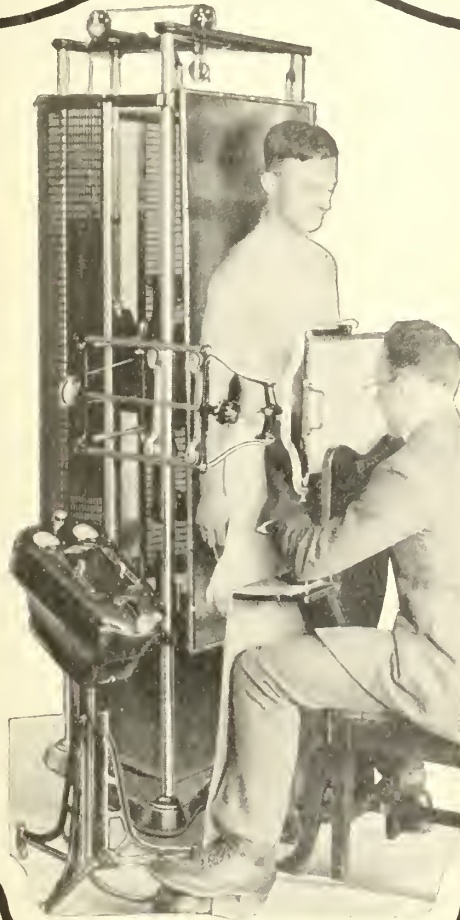
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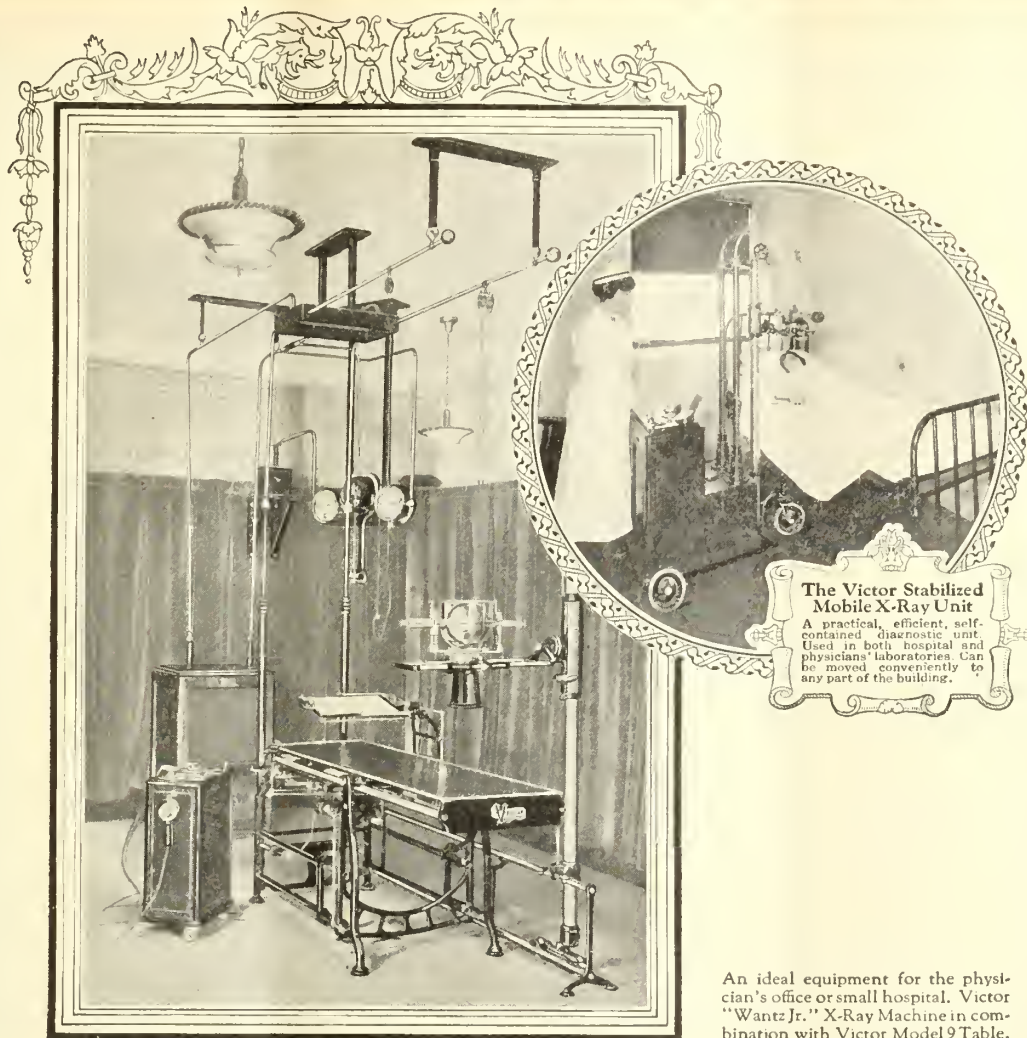
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VOL. XVII.

NOVEMBER, 1926

No. 11

*MENINGEAL AND CEREBRAL COMPLICATIONS OF OTITIC ORIGIN—REPORT OF FOUR CASES

By A. L. GRANT, JR., Auburn, Maine.

It is not an uncommon occurrence for a physician to be called to see a patient taken suddenly ill with a chill, followed by nausea and vomiting, and on his arrival find the patient in a stupor, delirious, or even in a state of coma. One often learns from some member of the family that the patient has had a chronically discharging ear for a number of years, dating back to an acute middle ear abscess, which occurred during an attack of scarlet fever, measles, whooping cough, influenza, acute tonsillitis, etc. A picture of this sort usually indicates a profound meningeal irritation. The spread of infection from a purulent process in the temporal bone, resulting in intracranial complications, may occur by any of the following pathways:

1. By direct contact of the dura with necrotic bone of tegmen tympani and antri.

2. Through an infected labyrinth by way of the internal meatus to the base of the skull.

3. By way of the carotid canal or along the facial nerve into the internal auditory canal, and from thence to the interior of the skull.

4. By way of the aqueductus cochleæ, which communicates with the sub-arachnoidal space.

5. By the migration of bacteria along the interspaces of the connective tissue bands, which follow the anastomotic blood and lymph vessels of the middle ear and cranial cavity.

Once infection has entered the cranium, any of the following conditions may result:

1. Circumscribed pachy-meningitis and extra dural abscess.

2. a. Circumscribed lepto-meningitis.

b. Purulent lepto-meningitis.

c. Serous meningitis.

3. Thrombosis of the sigmoid sinus.

4. Encephalitis and brain abscess.

As soon as a diagnosis of intracranial complication is once established and one is quite certain that it is of otitic origin,

* Read before the Maine Medical Association at Poland Spring, June, 1926.

surgery is the only measure that offers any hope for the recovery of the patient. Even though the case may seem hopelessly fatal, there should be no temporizing or delay. The patient should be given the advantage of surgical intervention.

CASE I.

Miss H. P., age 18, a stenographer. First seen at her home at 2.30 A. M., August 20, 1925. She was in coma, head drawn back, neck rigid, temperature 103, pulse 60, and respiration 20. The pupils were equal, reacted to light. Reflexes were exaggerated. Kernig's sign positive. In the canal of the left ear there was a small amount of foul-smelling, thick discharge. The mother stated that she had been in her usual good health the day before and attended to her work. At midnight, she complained of a severe headache, had a sharp chill, followed by nausea and vomiting, became delirious, and went into coma.

When she was four years old, she had an attack of scarlet fever, complicated by an acute otitis media. Ever since, she has had, off and on, a chronic discharging left ear, which would flare up whenever she had an acute head cold.

She was immediately taken to the Central Maine General Hospital.

Blood count, 37,000 leucocytes per mm. 87% polynuclear neutrophils.

Urine, catheter specimen. Large trace of albumin with granular casts.

Spinal fluid. Fluid under considerable pressure and markedly purulent.

Cell count. 18,600 cells per c. mm., 90 to 95% of which were polynuclears. Globulin increased. Organism later proved to be a pneumococcus.

Pre-operative diagnosis. Diffuse purulent leptomeningitis, probably with

brain abscess involving the temporo-sphenoidal lobe.

Soon after entering the etherizing room, her condition became rapidly worse. The anesthetist reported that she was pulseless, respiration very shallow, all color had left her cheeks, skin was cold and clammy, and he believed it was too late to operate. Without giving any anesthesia the left mastoid was opened. It was sclerotic, few cells in the region of the aditus. The antrum and middle ear were full of cholesteatoma, the lesion extending through the roof of the middle ear and antrum. The dura was covered with granulations and the necrotic tract led to an abscess in the temporo-sphenoidal lobe. One and one-half ounces of sero-fibrinous purulent fluid was evacuated. Immediately after the abscess was opened, and free drainage established, her condition began to improve. She commenced to thrash about on the table, and it was necessary to administer an anesthetic to finish the operation. Drainage was maintained by a small rubber tube extending well into the abscess cavity. The cavity in the mastoid and the wound were packed with iodoform gauze.

On the evening after the operation, the temperature was 104 by rectum, pulse 120, and respiration 32.

From August 20 to August 29, this patient was in a delirious and semicomatose state. The temperature varied from 100 in the morning to 103 at night, pulse 70 to 85, respiration remained at 20.

On August 29, temperature was 99, pulse 90, respiration 20. For the first time she recognized her mother and sister, and asked where she was and desired to know why she was in the hospital.

At noon the same day she developed a marked myocardial insufficiency. The nurse reported that she was pulseless, temperature 102, lips and fingers cyanosed, and the patient had again become comatose. Straphanthin, gr. 1/100, was given subcutaneously, repeated again in three hours. Digifolene, 1 c. c., was given every four hours for four doses. That evening her circulation showed some improvement, temperature 102, pulse 140, poor quality and irregular.

On August 30, the circulation showed marked improvement, although the patient was very restless.

August 31. Condition was much better. Temperature 100, pulse 100, respiration 24. Was conscious part of the day.

September 1. Temperature normal, pulse 90, respiration 20. Rational all day.

From September 1 to September 12, she showed steady improvement, slept well, took plenty of nourishment, and the mental condition had fully cleared up. Her wound all this time had drained satisfactorily. The tube leading to the abscess cavity was slowly removed in piece-meal fashion, there being practically no discharge from the wound.

September 13. She sat up in a chair for one hour.

September 14. Sat in chair for three hours, complained of headache during the night. Had slight emesis.

September 15. Complained of frontal headache. Had emesis. Right side of face and neck swollen. Temperature 98, pulse 80, respiration 20. Very uncomfortable all day.

September 16. Condition seemed better. Complained of no headache.

September 17. Condition about the same. Had some headache.

September 18. Very little headache. Temperature normal—98.6, pulse 80, respiration 20. Sat in chair for two hours.

September 19. Severe headache all day. At 6.30 P. M., pulse suddenly dropped to 58. Temperature 100, respiration 20. She became delirious, rotated head from side to side. There were twitchings of the right side of the face. The right arm and leg were spastic. She was immediately taken to the operating room and opened up again. The old abscess tract had fully healed. The plate covering the lateral sinus was completely removed. The sinus was normal. In front of the bend of the sinus was a necrotic tract which led to an abscess in the cerebellum, from which about two and one-half ounces of thick, green, foul-smelling pus was evacuated.

The condition on the following day was satisfactory. She was rational. Temperature 100, pulse 80, respiration 20.

From September 19 to 26, she showed steady improvement.

On the 26th, the lids of both eyes were puffy, ankles swollen, patient was nauseated and vomited a great deal. The urine was full of fresh blood, hylin and granular casts. Blood pressure 142-106. This condition finally cleared up by careful regulation of the diet and elimination. On the 14th day of October, she left the hospital.

On the 2nd day of January, 1926, she returned to work and to-day is in excellent health.

The outstanding features of this extraordinary case appear to be:

1. Severity of the infection.

2. The enormous cell increase in the spinal fluid.

3. The breakdown in the heart.

4. The development of a secondary abscess.

5. The classical development of paralysis on the opposite side to the brain lesion.

6. The development of kidney insufficiency, probably due to a blood borne infection, secondary to the brain lesion and caused by the same organism.

7. The almost unprecedented end result of an infection of such magnitude and severity. It hardly seemed possible that any patient so critically ill could get well irrespective of what was done.

CASE II.

John S., mill worker, age 55. About the middle of July, 1924, while repairing a machine, he received a sharp blow over the left mastoid. He was momentarily stunned, stopped work for a while, and reported the accident to his boss.

About a week later he began to have severe headache in the region of the left mastoid, much more severe at night. His family physician was unable to find the cause of his complaint. The night headache became almost unbearable. He was advised by his family physician to consult an otologist.

This he did about August 1. At that time he had a slight head cold and a sore throat. The otologist was unable to find any trouble except that the hearing on the left side was somewhat impaired. However, he was advised to have an X-ray of the mastoid taken, which advice he did not follow. His pain and suffering all the time were getting worse, and on August 14, he again consulted his otologist. At this time there was marked tenderness over the mastoid, sag-

ging of the superior canal wall, but no discharge from the middle ear. An X-ray showed marked destruction of the mastoid cells. He was advised to enter the hospital and undergo an operation, but still he procrastinated, and returned to his home.

On August 17, for the third time he sought the advice of his otologist. At this time there was marked redness and œdema over the mastoid. It was very tender on pressure. On the advice of his relatives, he was admitted to the Central Maine General Hospital at 9.00 P. M., August 17.

Condition on admission: Temperature 97, pulse 60, respiration 20. Patient was in a stupor. There were twitchings of the left side of the face, neck rigidity, head drawn back, and he could not be aroused. There was marked œdema and redness over the left mastoid, and sagging of the superior canal wall. Nothing could be made of the condition of the drum. No discharge from the ear.

White blood count, 19,000. Differ. 80% polymuclears. Organisms pneumococcus.

Pre-operative diagnosis, acute mastoiditis with perisinus abscess.

The mastoid cortex was unusually thick. As soon as the chisel passed through the cortex, a large amount of thick, green, foul-smelling pus, under great pressure, gushed from the opening. There was complete destruction of the mastoid process. The dural plate and the plate covering the lateral sinus were completely eroded. Cells in the region of the antrum were small. The aditus was small and narrow. There was no visible evidence of any involvement in the antrum or in the middle ear. The patient made an uneventful recovery

and left the hospital at the end of three weeks.

The interesting features of the case were:

1. History of the trauma.
2. Apparent absence of otitis media.
3. Slow pulse and sub-normal temperature.

Just how important a part trauma played in this case, it is impossible to state. For two weeks previous to his slight sore throat and head cold, he had had pains in the region of the left mastoid, much more severe at night. It is quite probable that when he had his slight sore throat and head cold, the infection passed through the Eustachian tube to the middle ear, the reaction, if any at that time, being very slight. The infection spread to the mastoid, which might have been previously inflamed from the severe trauma he received two weeks previously, resulting in an abscess formation. The cells about the aditus ad antrum being small were obstructed by an inflammatory involvement, which might have shut the middle ear from the mastoid process. Pressure of the abscess on the brain could account for the slow pulse. The fact that the abscess was well walled off, little toxin getting into the circulation to disturb the heat-regulating center, could account for the subnormal temperature.

CASE III.

Mrs. W., age 54, shoe stitcher. On Thursday, March 27, she returned from her work, complaining of a headache, cold in the head, and general malaise.

Friday, March 28, she called her family physician for the first time. At that time, she had a severe head cold, backache, and some cough. Temperature 99.4, pulse 80, respiration 25.

On Saturday, March 29, her condition was about the same, temperature 100, pulse 90, respiration 24.

March 30. Temperature was normal. She felt much better. During the night she developed a right middle ear abscess, which ruptured about 2.00 A. M., Monday morning.

On March 31, the right ear was discharging freely. The discharge was sero-sanguinous. Temperature was normal, there was no tenderness over the mastoid. She stated that she had never before had any trouble with her ears.

April 1. The discharge from the ear had lessened. Temperature normal, no tenderness about the mastoid. The patient was up and about the house.

April 2. Patient was about the house, apparently feeling perfectly well. She was seen by her family physician that forenoon, who found her condition apparently normal. About 2.00 P. M. the same day, her people noticed a marked change in her mental condition. She seemed very irritable, excitable, and complained of severe headache. At 4.00 P. M. she had a sharp chill, followed by nausea and vomiting. She became delirious, and at 6.00 P. M. was in coma. She was seen in consultation with the family physician. Pupils were equal and responded to light. Neck was rigid, head drawn back, and a positive Kernig's sign. Temperature 102, by arm pit, pulse 120, respiration 30. There was no discharge coming from the right ear. Drum red, with no bulging. There was no swelling, redness, or tenderness over the mastoid on pressure. She was immediately taken to the Central Maine General Hospital.

Lumbar puncture. The fluid was under moderate pressure, very cloudy, with a fibrinous clot.

Cell count 3,040 cells, 74% polymorphs, 26% small lymphocytes. Globulin test. Heavy precipitate. Gram stain showed an abundance of leucocytes with an occasional gram positive diplococcus with a capsule. Proved to be a pneumococcus. Pre-operative diagnosis: Purulent lepto-meningitis, with brain abscess involving the middle lobe.

Permission could not be obtained to operate that night, and the operation was deferred till the following noon. The mastoid process had undergone complete destruction, cells were filled with pus and granulations. The dural plate was necrotic and the dura covered with granulations. The lesion extended through the tegmen tympani and antrum into the temporosphenoidal lobe. Necrotic brain material prolapsed into the antrum. The pus was thick and fibrinous in character. The mastoid cavity was packed with iodoform gauze.

The patient was in a delirium for two days and died on the third day following the operation.

Comment: The outstanding features of this case were:

1. The unusual severity of the infection.
2. The tremendous amount of destruction done in so short a period of time. Only three and one-half days elapsed from the development of her middle ear abscess to the time of operation, when almost complete decalcification of the mastoid cells was discovered. The involvement in the brain was of an acute fulminating type, with no limiting sheath or capsule formation.

CASE IV.

Mrs. F., age 67. First seen Friday, March 5, at 2.00 P. M. Had complained of a severe earache for two days.

Right ear drum was red and bulging. Temperature 99, pulse 80, respiration 20. Patient was given gas and paracentesis tympani performed. The discharge was sero-sanguinis.

For two days the patient was very comfortable and greatly relieved of her pain by the paracentesis.

Patient visited office again on Monday, the 7th. Claimed that she had no pain whatever and was feeling well.

On Saturday, the 14th, she again consulted me and stated that she had suffered terrific pain on the night before. This pain lasted all through the night, but during the day she was very comfortable. At this time, the drum was red, but there was no bulging and no discharge. No soreness or tenderness over the mastoid. The danger attendant on pain of this character was laid before her in strongest terms and an immediate X-ray of the mastoid strongly urged. Unfortunately, she did not take this advice and returned home.

The patient was a woman who lived alone, and the last time she was seen by her friends was about 9.00 o'clock Saturday night.

On Monday morning, about 10.00 A. M., she was found lying on the floor by the telephone stand in a deep coma. It was apparent that she had been taken with terrific pain sometime Saturday night and had tried to get to the telephone to summon help. When seen her temperature was 103.3, pulse 140, respiration 20. Pupils moderately dilated. No discharge from the ear. Ear drum slightly red, and no bulging. Lumbar puncture, spinal fluid under pressure and cloudy. The organism later proved to be haemolytic-streptococcus. Mastoid was opened, found hyperæmic. The infection had gone through the roof

of the middle ear and antrum. Antrum full of granulations. The dura was very much congested. The dura was opened and a sanguinous discharge came away. The wound was carefully packed with iodoform gauze. The patient's condition improved somewhat a few hours after the operation, but she died that night at 10.30 P. M.

This case emphatically emphasizes the statement made in giving the history—that it is dangerous to delay. Had

this patient taken the advice so strongly urged upon her two days previous to her death, she might be alive to-day. Lesions of this character are considered absolutely hopeless. This operation was performed simply to give the patient the benefit of any theoretical chance.

LITERATURE.

Diseases of the Ear, Nose and Throat. Phillips, Chap. XXV, Otitic Diseases of the Meninges. Methods of Invasion. Diseases of the Ear. Kerrison, Chap. XIII, Intracranial Lesions of Otitic Origin.

CASE REPORTS

Tubal Pregnancy Requiring Transfusion

H. B., white, multipara. Patient was seen by her physician, Dr. Luther S. Mason, the morning of May 17, 1926, and sent to the Eastern Maine General Hospital with the diagnosis of ruptured tubal pregnancy. I saw her about four o'clock in the afternoon of the same day. She seemed to be rallying well from the shock incident to the rupture and her general condition was good. Supported by consultation, operation was deferred and instructions given to have her watched very carefully and any important change in her condition reported. About midnight her condition was reported as having become suddenly very bad. I hastened to the hospital and upon arrival found the patient white, pulseless, restless and general condition very wretched. With the utmost expedition she was taken to the operating room and a mid-line incision revealed the usual appearance of an ectopic pregnancy which had ruptured. A Kelley clamp was attached

to the right tube and broad ligament and the bleeding controlled. During the completion of the operation Dr. H. E. Thompson, pathologist (at the Eastern Maine General Hospital), injected into a vein in the arm 300 c. c. of a solution made as follows: With a sterile gauze sponge, the blood from the upper abdomen, which was still fluid, was sopped up and squeezed into a dish containing sterile normal salt solution in the following proportions, 40 parts salt solution and 60 parts blood. At the same time, with a 100 c. c. syringe he injected 800 c. c. of normal solution subpectorally. The patient's condition showed immediate improvement, the pulse returned with volume, rate 140, color returned to the face and lips. There was no violent reaction, except for marked hysteria during the first twenty-four hours following the operation. Nothing occurred to mar her steady progress to recovery, and she was discharged June 4, 1926.

I do not report this case in advocacy

of this very crude method of transfusion, but rather in the hope that it may serve others under such trying circumstances — patient exsanguinated, midnight, no donor, minutes precious. In this case it did prove efficient, and I believe helped materially to save this patient's life.

DANIEL McCANN, M. D.,
Bangor, Me.

Lacerated Wound of the Rectum

B. T., aged fifteen, female, admitted to the orthopedic service of the Eastern Maine General Hospital, June 25, 1926, and transferred to the surgical service the same afternoon.

HISTORY.

The child was walking in her sleep and fell over the railing to the floor below, impaling herself through the rectum on the handle of a carpet sweeper. There was little external evidence and no marked symptoms of serious injury. I was inclined to discredit the story, but the father and child were so insistent that it did enter

the rectum that I asked my colleague, Dr. Charles H. Burgess, to make a proctoscopic examination. He reported a lacerated wound of the rectum into the Douglass cul-de-sac, at a point corresponding to the reflection of the peritoneum from the uterus.

Operation followed the report without delay. The wound in the rectum was found as described and located by Dr. Burgess: blood and feces were present in the pelvis. After a very careful toilet of the pelvis, the wound in the gut was repaired, a tight seam was secured and the pelvis drained. The child had a stormy time for some days, incident to a sharp peritonitis; otherwise the recovery was uneventful and rapid.

The fact that the child lived I attribute to the painstaking care with which Dr. Burgess made the proctoscopic examination and the accuracy with which he defined the location and character of the injury. It determined immediate operation.

DANIEL McCANN, M. D.,
Bangor, Me.

JOURNAL OF THE MAINE MEDICAL ASSOCIATION

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Dr. James A. Spalding, Portland, Necrologist

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Dr. E. H. Risley, Waterville, Chairman Cancer Committee

Dr. Thomas A. Foster, Portland, Chairman Scientific Committee

EDITORIAL COMMENT

The Physician in Politics

Every now and then we notice in various medical papers the suggestion that physicians should go into politics, for the benefit of the health of the people and for the status of the profession with the public. So, too, demands have been made for a physician on the Governor's Council. This last idea was attained in Maine, but we doubt if the results reached our expectation. Might it not be better for all concerned if a physician were appointed to the Governor's Council instead of being elected from a political party? Leaving this point aside, we are reminded of a physician who went to the Maine Legislature, hoping to do a great deal for the people and for the profession, but who, at the end of the session, made his confession: "I went to the Legislature to try to get something done. I was log-rolled out of every suggested improvement. It cost me two thousand dollars, to say nothing of loss of practice. I came home and went to work again as a plain country doctor, convinced that, so far as my experience goes, doctors in politics can accomplish very little."

We now go on to suggest that it would be excellent for all physicians chosen to the Legislature to vote, so far as their consciences will allow them, for the gen-

eral policies outlined by the *Journal of the A. M. A.*, and of its Trustees. We make this remark because, as we were informed, some physicians have voted in favor of the Shepherd-Towner Bill, despite the persistent and praiseworthy opposition of the *Journal of the A. M. A.*

The ideal of the Shepherd-Towner Bill is good. It sounds fine to think that we are saving mothers and babies, but is this to be accomplished by surrendering our rights as a state to the government at Washington; by accepting a bribe from the government to dominate the people of Maine; by taking money from other states to help out our own state work; and finally, by introducing midwives and nurses into the families of deserving practitioners of medicine? A physician in the Legislature should never vote for anything, no matter how good it looks, nor how little harm they see in it, if in any way it threatens the means of living of educated and licensed practitioners of medicine.

Finally, so far as the physician in politics is concerned, we believe that every county society should vote to the effect that, in their opinion, physicians in the Legislature should, so far as their consciences allow them, always favor the

honest and often-repeated opinion of the Trustees of the American Medical Association as outlined in its *Journal*.

J. A. S.

Medical Relief in Disasters

We hope that the President of every county medical society in Maine will bear in mind to speak about a campaign for medical relief in cases of disaster, as outlined in a late number of the *Journal of the A. M. A.* The idea in brief is, to have ready a medical county and state committee for immediate public relief in cases of any great disaster, such as a revolution, an earthquake, a bombardment from the sky or a great conflagration. The ultimate head of the state medical relief society, as thus suggested, should be the President of the State Medical Association, and it should be his duty to keep in touch with the Disaster Committee of the A. M. A., which would be a National Committee at the head of all the state medical societies. Although the Red Cross would, of course, continue to do its wonderful and benevolent work, yet an active and instantaneous co-operation between the physicians of the nation and those at the head of the Red Cross would be of the greatest possible benefit for the entire country when facing some great disaster. We commend this idea to the secretary of each county, hoping that he will bear it in mind and make a note of it for the President at the next following meeting. We have had wonderful voluntary relief in former disasters, as at Halifax, not long ago, but we shall in further emergencies look for more rapid and more efficient medical relief to the afflicted people, under a plan as herein suggested, and more fully

outlined in current articles of the *Journal of the A. M. A.*

J. A. S.

Minors in Motor Cars

When we think of the enormous number of accidents to people in motor cars, to say nothing of those persons who are killed in the streets by other cars, it seems to us that the physicians of Portland can do no greater service to the city and the state than by a solemn protest against the driving of motor cars by minors. Louder still should be the cry against children, for many drivers of motor cars of today are hardly more than ten or twelve years of age, having been left at the wheel to show off by proud parents what our children can do with a car. It is impossible to patrol long reaches of road to pick out instances of this dangerous practice, but a protest from physicians to the city government and the State Board of License should awake public conscience for one day, at any rate, to this danger. Too many adults with small skill, and less mentality, are driving cars of today, and it is time that a protest also should be expressed to those in authority that there ought to be a more careful examination of all who ask for a license to drive. This state of affairs is appalling, but nobody seems to suggest a remedy. A beginning might be made by fining the parents of minor drivers for consenting to or encouraging so thoughtless and dangerous a procedure by their children, or by relatives in their family. Little did the inventor of the self-moving pleasure carriage think of the one hundred and sixty thousand, four hundred and fifty people who have been ruthlessly killed in this country in the last five years by his invention.

J. A. S.

NECROLOGY

John Warren Achorn

John Warren Achorn, an eminent retired Boston physician, died at his summer home, Annisquam, in Gloucester, Mass., August 5, 1926. He was born in Newcastle, Me., Jan. 30, 1857, son of Dr. John Taylor and Clara Rundlett Achorn. He graduated at Bowdoin College in 1879, and from the Medical School in 1887. Subsequently he graduated from the Bellevue Medical College in New York and studied in Berlin, Germany. After service in the Berlin Charity Hospital, Brooklyn, N. Y., the City Hospital and the California Woman's Hospital, he settled in Boston and practiced general medicine for years, after which he became a specialist in gastro-intestinal diseases, being called into court as an expert, where he stood high with the judges, who, on many occasions, acknowledged the value of his testimony. He was a retired member of the Massachusetts Medical Society, but an active fellow in the American Medical Association and the North Carolina Medical Association. He contributed articles of real value to the medical journals of the country and wrote a

number of pamphlets, showing the importance of the mind as a dominating factor in the cure of ills that flesh is heir to. He was associated with Rev. Dr. Elwood Worcester, of Emmanuel Church, in his movement, and was physician to the Invalid Aid Society, of which the late Rev. Dr. E. E. Hale was a director. About the beginning of the World War, he began to spend his winters at Pine Bluff, N. C., where he became interested in matters of public health and the preservation of animal and bird life of America. He traveled much, and made many addresses before public bodies and urged legislation on Congress. His work was devoted to stimulating a love for birds among children and he spent much time during his last days collecting data and preparing pictures for a book on the birds of North Carolina, having the co-operation of the Roosevelt Foundation, the Smithsonian Institute and the leading men of the country. Dr. Achorn leaves his wife, who was Miss Harriet Priscilla Sawyer, and a brother, Edward O. Achorn, of Brunswick, Maine.

E. E. HOLT.

COUNTY NEWS AND NOTES**Penobscot County Medical Society**

Tuesday evening, October 19, 1926, at the Bangor House, the Penobscot County Medical Society held its regular meeting.

Dr. H. D. McNeil gave an interesting talk on "Typhoid Fever and Scarlet Fever."

Dr. Carl J. O'Brien's subject was "Tuberculosis," which was also most interesting.

The minutes of the last meeting were read and accepted.

Business at 7.30 P. M.; dinner at 8.00.

The following were present: Dr. Luther S. Mason, Dr. H. D. McNeil, Dr. C. J. O'Brien, J. H. Murphy, Dexter, G. B. Tibbetts, Orrington, C. F. Thompson, D. A. Robinson, W. E. Fellows, E. S. Merrill, F. B. Ames, L. R. Smith, Winterport, H. C. Knowlton,

Hampden, S. J. Redman, Dexter, L. H. Ford, W. B. Trickey, Pittsfield, J. P. Russell, South Brewer, A. W. Fellows, M. C. Madden, Old Town, Dr. Silsby, M. A. Webber, Pittsfield, Dr. Freeman, H. E. Thompson, B. L. Bryant, R. E. Bousfield, J. D. Clements, M. C. Moul-

ton, Norman Cook, Newport, C. B. Popplestone, Joseph Lezberg, Kenduskeag, Dr. Roberts, A. K. P. Smith, M. W. Emerson, Daniel McCann, F. D. Weymouth, H. G. McKay, Howland, E. E. Brown, J. B. Thompson, S. N. Marsh, West Enfield, and E. L. Herlihy.

NOTES

An Aid to the Medical Practitioner

Physicians treating venereal disease cases have frequently expressed a need for a pamphlet containing instructions and advice to be given to venereal disease patients. Due to the nature of these diseases and the regimen which proper treatment requires, the need for such a publication has long been apparent. Some time ago the U. S. Public Health Service prepared a pamphlet, known as "Important Confidential Information," expressly for this purpose. The leaflet is in two parts, one dealing with gonorrhea and the other with syphilis. Advice is given, among other points, on the following: Importance of continuing treatment until cured, proper diet while under treatment, proper care to prevent the spread of the disease, the futility and danger of quacks and self treatment, sex conduct and marriage.

Many physicians have found this publication a valuable aid in securing the co-operation of the patient while under treatment, and also as an aid in holding the patient until cured or rendered non-infectious. Copies of this publication are available from most State Departments of Health or they may be secured by writing to the U. S. Public Health Service, Washington, D. C.

Keeping Fit

This is primarily an age of physical fitness. Growing boys everywhere are bending their efforts to the development of muscular ability and a sound physique, whether their purpose is to excel in one of the many fields of athletics or to prepare for a life of vigorous manual effort.

To-day the growing American youth has before him as shining goals the great champions in the various fields of sport. Our boxing champions, our golfing champions, our swimming champions are generally considered the champions of the world.

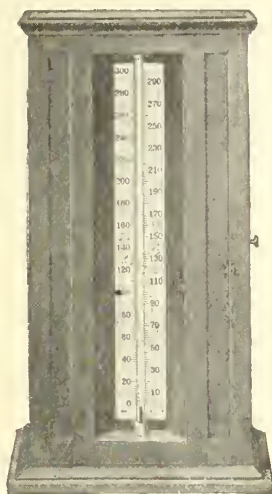
But the physical perfection necessary to become a champion in any field of physical activity is not a matter of accident or chance. Back of every champion you will find a ground work of sound physical development which has been maintained by constant exercise and intelligent training.

Every normal boy has the desire to attain a high degree of physical fitness. Many, however, are handicapped by lack of proper information on training rules and care of the body.

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U. S. Veterans Bureau

The Board of Medical Officers appointed by the Director of the U. S. Veterans Bureau to study the residual effects of war gas expects to complete its studies of chlorine gassing by the first of the year.

The Board, which held its first meeting March 9, 1926, is composed of Dr. Allen K. Kranse, Member of the Group on Investigation and Research of the

Medical Council of the U. S. Veterans Bureau and Associate Professor of Medicine at Johns Hopkins University; Lt. Col. Harry L. Gilchrist, M. C., U. S. A., Chief of Research Division, Chemical Warfare Service, U. S. A., and Dr. Philip B. Matz, Chief, Medical Research Sub-division, U. S. Veterans Bureau.

Records show that approximately 70,000 men were gas casualties of varying degrees of severity during the war, 1,843 of which were from chlorine gas. The War Department has made an investigation of the immediate effects of chlorine gassing in over 800 cases, and the present study by the Veterans Bureau is expected to develop important information pertaining to the residual effects of this gas.

Upon completion of their investigation of chlorine gassing, the Board will commence a survey of the cases resulting from phosgene, mustard and other gases.



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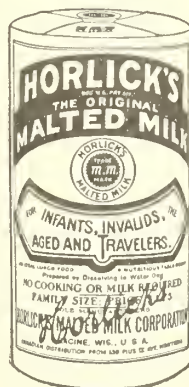
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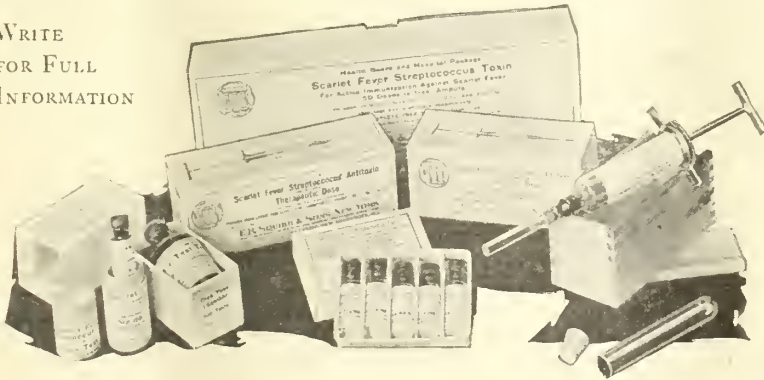
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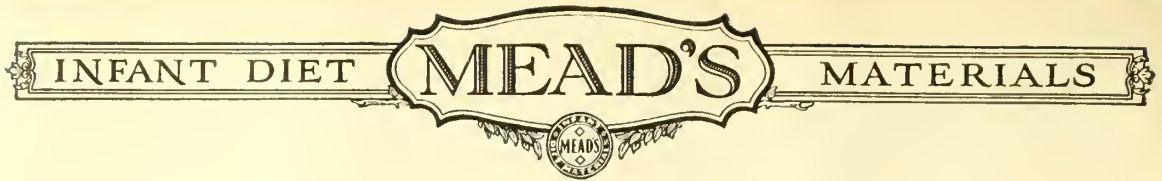
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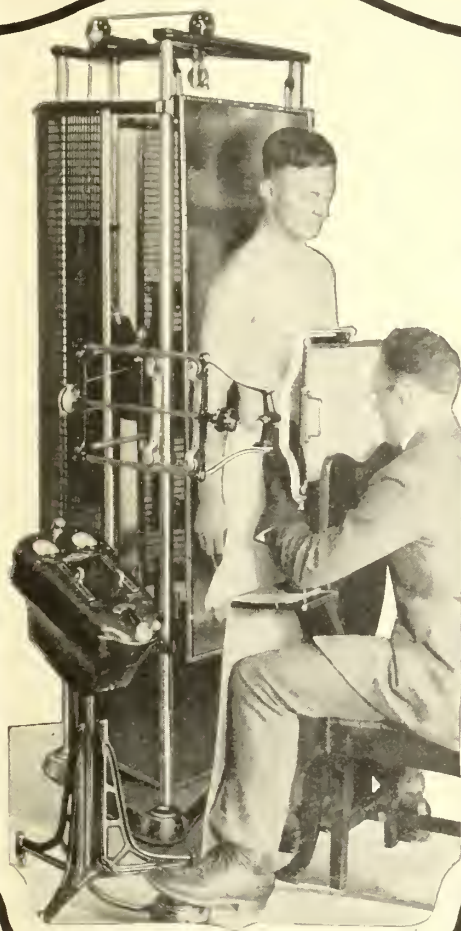
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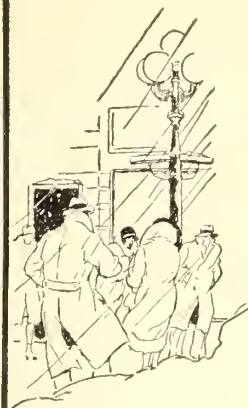
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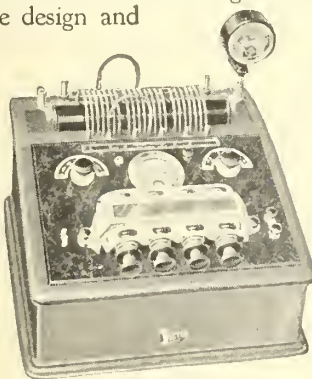
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VOL. XVII.

DECEMBER, 1926

No. 12

*DISEASES OF THE GALL BLADDER

By JOHN B. DEAVER, M. D., Philadelphia, Pa.

It is a privilege to address the State of Maine Medical Association upon the subject chosen for me, "Diseases of the Gall Bladder," a subject of lively interest to surgeon, internist and general practitioner.

The empirical methods of surgery have bared the secrets of biliary infection, stimulated the study of biliary physiology, and the surgeon and patient have profited by the co-operation of the internist, the pathologist, and the research worker. The incidence of cholecystitis ranks second only to appendicitis, and the present-day interest is centered on early diagnosis, because the best results follow when surgical aid is invoked before the onset of the stage of gallstone colic. I shall submit for your consideration the results of my experiences and attempt to answer questions of general interest with regard to gall bladder disease.

The gall bladder is the most frequently diseased structure in the upper abdomen and second only to the appen-

dix as a surgical trophy. It develops from the same anlage as the liver and becomes differentiated as an outpouching of the duct system. The position and anatomical boundaries of the gall bladder are well known, and there is an intimate association through the lymphatics with the liver, pancreas, duodenum, and indirectly with the entire portal system. Any infection carried to the liver may find its way to the gall bladder through lymphatics in its attachment to the liver, and infection may extend from the gall bladder to the liver. It is a fibromuscular sac, having a capacity of one or two ounces, where there is natural stasis and retention because of its high exit and the action of the valves of Heister in the cystic duct. Bile enters the gall bladder with ease, but leaves it with difficulty. The blood supply is from the cystic artery, which is a branch of the hepatic, and from many smaller arteries which come in through its attachment to the liver. The nerve supply is through the sympathetic, although the

* Read before the Maine Medical Association, Poland Springs, Maine, June, 1926.

explanation and mechanism of biliary colic is obscure. It may occur when the gall bladder contains one or many stones, or even in the absence of stones and of gross evidence of disease. The ducts themselves may be the origin of pain, because colic sometimes occurs even after the gall bladder has been removed. Muscle spasm of the sphincter of the cystic and common ducts may be the cause of the painful distension and colic.

What is the purpose of the gall bladder? The three demonstrated functions are to store and concentrate bile and to secrete mucus. Since the time of the first cholecystectomy it has been noted that gall bladder bile is more concentrated than liver bile, but only recently has this concentration been measured and found to be about ten times greater. The storage capacity of the gall bladder is thus much increased by its powers of fluid absorption. Its fibro-elastic and muscular wall permits it to serve as a tension bulb. The above functions are demonstrated by the fact that in complete obstruction of the common duct jaundice develops sooner when the gall bladder is functionless or when it has been removed than when it is normal. It bears a relation, as yet unknown, to digestion and to the metabolism of fat and cholesterol. Its presence is not essential for life and health. There is no effort on the part of nature to form a new gall bladder, nor to compensate for its lost function. The only known effect of cholecystectomy is dilatation of the bile ducts, and even this is not constant. Usually, when the surgeon is called, nature has already extirpated the gall bladder and he merely completes the removal of the damaged organ. In the animal kingdom the presence of the

gall bladder is subject to peculiar variations, since it may be present in some and absent in others of the same species.

What is the pathological condition causing disease of the gall bladder? It is reasonably certain that some metabolic disturbance favors the formation of gallstones, since its victims are often female, fair, fat, forty and flatulent. There seems to be a relationship between gallstones and a high cholesterol content of the blood. It may be only a coincidence, or possibly the two conditions may have the same underlying cause. The single cholesterol stone may represent a metabolic error. From the practical surgical standpoint, we believe that cholecystitis is more important than cholelithiasis, that the latter is the sequel of the former, and that the prime factor is infection. To obtain the best results we must deal with cholecystitis before stones have formed.

Infection can reach the gall bladder through the blood stream, by way of the cystic artery and through small vessels in the liver attachment; by way of the lymphatics from the liver; by way of the bile; by way of the common duct through its lumen or wall. In a given case only one, or several, or all of these routes may be used. Infection from the appendix may take several routes, and in my experience it is the most common focus. Thus Peterman injected bacteria into the veins of the appendix and later recovered these from the liver and from the walls of the gall bladder. The liver deals principally with blood from the portal circulation and the most frequent site of infection in the portal system is the appendix. Rosenow believes that certain strains of bacteria show a selective affinity for the gall bladder. The organ is particularly vul-

nerable in bacteremia, as is evidenced by its involvement in pneumonia and typhoid fever, and after injection of large doses of bacteria into the circulation. Infection by way of the bile is probably the least common, and in our work we have usually found the bile sterile. The colon bacillus is the most frequent organism found in cholecystitis.

Stasis is normal in the gall bladder, but prolonged retention and obstruction are the result of inflammatory changes in the walls and in the cystic duct and favor the formation of stones. In most cases infection precedes stone formation. The chief fact in the pathology of cholecystitis is that the infection, with its inflammatory changes, is in the walls of the gall bladder and the infected gall bladder cannot be likened to an abscess cavity. Therefore, to remove stones and drain the gall bladder should not be a procedure of choice, because infection persists, stones form again, and the symptoms will recur.

Cholecystitis is usually a chronic, insidious, persistent process which is subject to acute exacerbations. Primary acute cholecystitis is probably rare. The different pathological processes, such as catarrhal, interstitial, suppurative, gangrenous, cystic and empyematous, are varying degrees and developments of an underlying lesion. A study of the early lesions of cholecystitis shows the primary changes to be in the mucosa and submucosa. In all cases of cholecystitis at some time or other there is a degree of cholangitis. Sections of common duct removed at autopsy from cases of cholecystitis usually show evidence of past or present inflammation. An associated choledochitis may be the cause of symptoms of obstruction and stricture after

cholecystectomy. This fact, together with the almost constant presence of hepatitis, emphasizes the importance of the associated lesions of cholecystitis and the bearing they have on its complications, sequelae, and post-operative results. The importance of the gall bladder as a focus of infection was early shown by Kehr in the relation between cholecystitis and myocarditis, an observation which has since been repeatedly verified. It has also been shown in some instances that gastric hemorrhage, in the absence of ulcer, has been caused by cholecystitis.

What are the different types of disease of the gall bladder? Textbooks and pathological reports speak of cholecystitis, as being acute, chronic, catarrhal, interstitial, membranous, phlegmonous, gangrenous, suppurative, cystic and empyematous, with or without stones. There may be either an acute perforation or a slow ulcerative process with the formation of an internal biliary fistula into a neighboring viscus, which is most commonly the duodenum, but may have any origin from the lung and the pericardium to the urinary bladder and the uterus. Inflammation may extend through the wall of the gall bladder with the formation of extensive pericholecystic adhesions.

The composition of the stones when present varies and is not of practical importance. The pure cholesterol stone is usually single and gives rise to symptoms by obstructing the outlet of the gall bladder. The most common variety of stone is a mixed bilirubin calcium stone. There may be one or several crops of stones in the same gall bladder, varying in size, shape and composition. The organ may be shriveled

and shrunken or dilated to the capacity of a quart.

Malignancy, which may be adenocarcinoma, epithelioma, and lymphosarcoma, is not uncommon and usually presents an utterly hopeless situation. Benign tumors, such as adenoma and papilloma, may be found. Many of the above lesions are the end-products of disease—the ashes of pathology. In our surgical work, where there is opportunity to observe the early deviations from the normal, we have come to recognize that cholecystitis is usually a chronic insidious infection, and that the descriptive terms commonly applied to advanced processes will lose their significance, or at least their popularity, when preventive surgery takes its place with preventive medicine.

What is the relationship between gall bladder disease and gallstone disease? Unfortunately this distinction persists as a historical relic. It should have no place in our present-day conception of the pathology and certainly should not influence the choice of therapeutic procedure. Calculi may be present early in cholecystitis, and are nearly always associated with prolonged and advanced infection. The symptoms of cholecystitis and cholelithiasis are often identical, and magical powers may be required to produce the promised stones at time of operation. Metabolic disturbance may favor the formation of stones, but infection of the gall bladder and its effects on the contained bile are the more plausible etiologic factors. Cholecystitis produces the chemical and physical environment conducive to the formation of calculi. Stones originate almost exclusively within the gall bladder.

Can we always be reasonably sure that we are dealing with gall bladder or gallstone disease? The classical syndrome of gallstone colic is unmistakable. Only rarely does the surgeon see the patient in this stage. Therefore, it is important, when eliciting the history of a patient who tells of repeated attacks of epigastric pain, to determine carefully the details of a typical attack. Difficulty arises in the large group of cases in whom acute attacks never occur, and where a differential diagnosis must consider appendicitis, peptic ulcer, pancreatitis, renal disease, tabes, angina pectoris, etc. The method of procedure becomes one of elimination. We make a careful physical examination and note particularly the size of the liver, the presence of a palpable mass, which may be a distended gall bladder, and the location of areas of tenderness and rigidity. On the basis of the history and examination, the experienced clinician and surgeon arrives intuitively at a working diagnosis. Laboratory aids are invoked as confirmatory evidence, and because they help in the study of disease, and make for scientific progress. In addition to the routine laboratory tests, we make use of the Van den Bergh test, icterus index, liver functional tests, Roentgen-ray examinations, which include kidneys, stomach, duodenum, and cholecystography after the administration of the dye. These tests are often disappointing in the help they give, and we do not allow them to materially influence our decision. They give us a mechanical and chemical estimate of our patient. Diagnosis aims to be specific, but cannot be made infallible. Association of lesions in the upper abdomen is common, and in his final decision the

surgeon must be content to recognize the need for exploration.

Jaundice, though not a symptom of gall bladder disease, is a danger signal of the onset of complications and sequelæ of cholecystitis. When it follows an attack of pain, it signifies the presence of cholangitis or stone in the common duct, or both, and sometimes the presence of pancreatitis.

The law of Courvosier supports the fact that stone in the common duct is a result of prolonged cholecystitis. A diseased gall bladder is not capable of dilatation unless drainage through the cystic duct is completely blocked, a condition which leads to hydrops and empyema.

Positive X-ray findings of gallstones are very helpful, provided they can be distinguished from stones in the right kidney. Diagnosis based on visualization of the gall bladder is not trustworthy, and cholecystography, after administration of tetraiodophenolphthalein, requires expert interpretation. Its efficiency in the diagnosis of early cholecystitis is very doubtful, because we know little about the physiology of the normal gall bladder and much less about its pathological physiology. When there is well-developed disease of the gall bladder, X-ray evidence is superfluous for diagnosis, and cholecystography is valueless in the presence of jaundice.

The symptoms of cholecystitis may be entirely expressed by gastric disturbance and fall in the group of surgical dyspepsias. Here it is important to bear in mind that cholecystitis and duodenal ulcer are frequently associated. The return of symptoms after operation for the one condition is often due to failure to recognize the co-existence of the

other lesion. Cholecystectomy, of course, will not cure duodenal ulcer.

A most difficult group for diagnosis are the patients who have trouble following operations on the biliary tract. They often seek the help of another surgeon, and he is most willing to refer them back to the original operator, because secondary operations on the biliary tract are among the most difficult in surgery. In these cases it is important to know the history and the indications preceding the first operation, the findings and what was done at the time of operation, and the events in the post-operative convalescence. The new condition may be a stone or stricture of the common duct or the duct may have been occluded by a ligature, pancreatitis, hepatitis, choledochitis, and dense adhesions following the use of gauze in wound infection. Adhesions after cholecystectomy may cause pyloric obstruction, a condition which will require gastroenterostomy.

What may be expected from medical treatment, and what from surgical? It is a happy and successful partnership when the internist and surgeon combine their efforts in the treatment of disease. Facts cannot be changed by a militant and selective advocacy of any one procedure. In its early history, medicine dealt with symptoms long before cholecystitis was recognized. Through clinical and pathological study pathognomonic symptoms were defined and gall bladder disease came under medical treatment. Its methods have always remained empiric, and at best its results have been confined to the control of symptoms. The popularity and results of the treatment at the various Spas were essentially due to the regulation of habits and sound principles of living.

Gall bladder disease is a chronic process which can often be nursed along for many years. It is not unusual to find an interval of five or ten years between attacks. Unfortunately we have no means to determine the progress of the disease nor to foretell impending complications. However, we are aware of the natural history of gall bladder disease and know that its progress when unimpeded is not toward spontaneous cure. Physicians and patients formerly looked upon the passage of gallstones as evidence that the disease was cured. But a stone must be quite small in order to successfully traverse the cystic and common ducts and pass into the duodenum. The passage of large stones is only possible after the formation of serious complicating lesions, as by a communicating fistula between the gall bladder and the duodenum or the stomach or colon. The older pathologic reports contain many instances of bizarre internal biliary fistulas, which involved the pleura, bronchi, pericardium, portal vein, urinary bladder and uterus. Many of these patients enjoyed cures at the various watering places.

Through experimental and surgical pathologic study it is now recognized that cholecystitis is an infection of the wall of the gall bladder secondary to a contributory focus, that stones are sequelæ of this infection, and that the course of the disease is marked by involvement of the liver, the pancreas, and sometimes the spleen. Intervals of symptomatic relief mean only smouldering of embers that may at any time blaze into activity. Cholecystitis may be called a surgical sleeping sickness.

Gallstone colic is a late manifestation of cholecystitis. What Moynihan has termed the inaugural symptoms begin

in early adult life and are commonly treated under the names of dyspepsia the flatulence. This is being constantly demonstrated by the surgeon in his daily work. Patients usually reach the operating table after prolonged medical treatment. The vaunted therapeutic benefits of duodenal tubage cannot appeal to one who has had a long surgical experience. To treat disease of the biliary tract by extracting bile from the duodenum can accomplish no more good than to treat disease of the intestines or kidneys by promoting the passage of feces or urine. There are no biliary antiseptics. Urotropin and mercurochrome cannot reach the biliary tract in sufficient concentration to do good. Even if this were possible, an antiseptic bile would not reach the infected areas. Bile from a diseased gall bladder contains bacteria in only about one-fifth of the cases.

The medical treatment of cholecystitis cannot be more than a makeshift procedure. Its most useful purpose is in the pre-operative preparation of the patient, and this period should be as short as possible.

Surgery must not be blamed for the poor results which sometimes follow in long-standing cases. Prognosis depends on pathology and treatment. Cholecystectomy in the early stage of cholecystitis removes the disease, but at a later date the complicating lesions of hepatitis, biliary cirrhosis, pancreatic lymphangitis, and chronic pancreatitis have become established. Surgery can then stay the progress of the disease, but recovery is slow and results are less certain.

The management of acute cholecystitis should be based on the principle of anatomical and physiological rest. This

is secured by rest in bed, enough morphia to relieve pain, withholding nourishment by mouth in order to quiet peristalsis, supplying fluid by proctoeclysis or hypodermoclysis, and cold applications to the abdomen. In the acute stage there is more or less general portal infection and often a pericholecystic peritonitis.

Under the above regimen, subsidence and localization of the infection take place. It is this principle which determines our practice not to operate during the active stage. To intervene during this period of peritoneal irritation and widespread inflammation is to court unnecessary danger. An interval operation, as in cases of appendicitis, is more simple and more safe. During the time of observation the surgeon must be on the alert to detect symptoms of suppuration, gangrene, or perforation of the gall bladder, conditions which are rare, but when they occur demand immediate operation. In this

connection, I wish to stress the importance of auscultation of the abdomen. It is rarely mentioned in articles written upon acute abdominal conditions. In my work it has been one of the most reliable means not only of determining the degree of peritonitis, if present, but also of determining the opportune time for operative interference.

Finally, let me make the plea that the limits of biliary surgery be extended in a manner justified by its results. I refer particularly to the early cases of cholecystitis in the stage before the onset of gall-stone colic. Operation should not be a measure of last resort, nor should its benefits be denied to many patients formerly considered poor surgical risks because of cardiac disease. By careful selection and preparation, many of these handicapped patients can be safely carried through an operation which rids them of a disturbing and dangerous condition.

DYSPEPSIA

By FRANCIS W. PALFREY, M. D., Boston.

The title "Dyspepsia" may perhaps be criticized as unscientific. My answer to this is, that this paper is not intended to be a scientific one, but rather a practical discussion of what to do in clinical situations. The word dyspepsia has been used for a title for the purpose of indicating that I have not meant to confine myself to the diseases of the stomach which have been most described, but to include as well disorders which have not been studied scientifically, even to

the extent of giving them names.

There are three and only three organic diseases of the stomach which occur except as rarities: ulcer, cancer and pyloric stenosis. If the last of these is considered, as usually is the case, to be a result either of the first or of the second, the number is reduced to two. Such conditions as atrophic gastritis, hourglass stomach and benign tumors are excluded from this discussion because of their infrequent occurrence.

* Read before the Cumberland County Medical Society.

But these organic diseases account for only a minority of the cases with digestive complaints. Pyloric stenosis is easily excluded. Cancer can usually be ruled out. And in most cases it can be said that if peptic ulcer is present it must be of a type which does not give the evidence which we require for diagnosis. But with all three of these organic diseases shown to be unlikely, many patients still complain of dyspepsia.

Among these patients who complain of dyspepsia there is another group, or really two groups, composed of cases where there is organic disease, but where the organic disease is one not primarily of the stomach. An important class of patients who complain of gastric symptoms is composed of those who have gastric disorders which seem to be caused reflexly by other abdominal disease, especially disease of the gall-bladder. Abnormalities of the appendix or of the intestines, and sometimes post-operative results, may cause gastric symptoms. I have known disease of the prostate to act in this way in a patient whose symptoms seemed to be typical of gastric ulcer, but who ceased to have gastric symptoms promptly when the catheter life was instituted for prostatic retention. It is probable that pelvic disease in women can cause these reflex gastric indigestions.

Of the more remote organic conditions which give gastric symptoms may be mentioned pulmonary tuberculosis, pregnancy, uremia and chronic pharyngitis. But again, after we have excluded organic disease of the stomach, organic disease elsewhere in the abdomen, and general diseases, there still remain many patients who complain of dyspepsia. Our everyday problem is how to classify these patients and how to

give each one the treatment which is most likely to result in his improvement.

It is now over twenty years that I have been dealing with these patients with some special interest, partly because most of my colleagues prefer to avoid them. And as a natural result of these dealings the practical problem has become somewhat systematized in my mind, as I shall attempt to describe. These opinions of mine I cannot give you as absolutely proved facts, but they seem to me the best conclusions to be drawn from the evidence at the present time at hand. Furthermore, by using these conceptions as a working basis I have felt that the clinical results were better in consequence.

A full discussion of what I am trying to explain would necessitate a review of the physiology of the stomach, calling attention to how the stomach receives food at a meal, retains it for a while, mixing it with acid gastric juice which dissolves the protein, and gradually discharging its contents, little by little, into the intestine. But this I can assume to be familiar to all of you, so that I will omit all of it except to mention two facts of physiology which have often failed to receive the attention that they deserve.

The first point is that the stomach is an air-containing organ. The fasting stomach contains air and only a very little fluid. The stomach after a meal is taken contains the same air, the meal, and the gastric juice secreted. As gastric digestion is finished the meal and the secretions are passed on, but the air remains. The gaseous content of the stomach is not composed of gases of fermentation. It is simply air. Contrary to popular belief, gas-forming fermentation in the stomach is negligible except in pyloric stenosis.

The second point which has sometimes been forgotten is the function of the pylorus. In the past, attention has been focused too much upon the chemistry of gastric contents which were obtained by stomach tube. This led the writers of textbooks to pay too much attention to secretion, as expressed in the terms hyperacidity and hypersecretion. It is only gradually coming to be the opinion that when an excess of secretion is found to exist in the stomach this may well represent only the accumulation of normal secretion which the pylorus has failed to pass on to the intestine at a sufficiently rapid rate.

Normal digestion is without conscious sensation. Dyspepsia, whether it is due to organic disease or to no known organic disease, is a matter of abnormal sensations or sometimes of actions. Therefore in treating cases of dyspepsia, particularly those in which there is no known organic disease, it is of considerable advantage to trace the probable mechanism of production of the abnormal sensation. These abnormal sensations or symptoms are especially apt to occur in certain groups or syndromes, which seem to be recognizable through the confusion of atypical cases. Some of these are definite enough to deserve names, and some have been given names which, however, for the most part hardly describe them.

There seem to be five types of abnormal action of the stomach upon which these clinical syndromes are apparently based, as follows:

1. Gastric function may be inhibited or depressed. This expresses itself first in loss of appetite. If the appetite is forced, or if the inhibition begins after a meal has been taken, nausea and vomiting of undigested food result.

Seasickness is one illustration, but other clinical types exist.

2. The stomach may be irritated. An illustration of this is the burning sensation referred to the stomach which we have when we test sample drugs on ourselves. In patients this irritation may result from irritants ingested, from irritants formed in the stomach, or probably from spontaneous inflammation. Presumably this represents the red mucous membrane which Beaumont saw sometimes in St. Martin.

3. Abnormalities of tonicity with symptoms of pressure must be recognized.

4. The hyperacidity-ulcer syndrome is most probably one in which discharge from the stomach into the duodenum does not keep pace with the secretion, and the accumulating secretion awaiting discharge exercises an irritant action.

5. In hypersecretion, so-called, active secretion seems to proceed in the absence of food, but also closure of the pylorus preventing discharge of this secretion must be assumed.

The five clinical types of dyspepsia or of unsatisfactory gastric digestion which stand out in my mind are apparently based each upon one of these abnormal processes.

(1.) *Syndrome of deficient or inhibited action.* In previous writings I have coined the name gastric asthenia for this condition, since the term gastric neurosis has been so much abused that it is best discarded. Patients with this type of disorder complain of poor appetite, of sense of weight in the epigastrium, and especially of nausea and sometimes of vomiting. Pain and irritative sensations are absent. This syndrome may occur occasionally in any one, particularly in fatigue, but is present

frequently or constantly in neurasthenies. Seasickness is probably a closely allied temporary condition. The physiologic basis seems probably to be an inhibition or a failure to proceed on the part of all normal functions of the stomach. The cause is clearly in the nervous system and not in the mucosa or muscles of the stomach.*

(2.) *Irritation syndrome.* Gastritis probably would be a proper term, but has been avoided, since the degree of inflammation is not such that it is found anatomically by the pathologists. The presenting symptom is a burning discomfort in the stomach, which is little if at all relieved by alkalies, and is familiarly illustrated by saying that it is the sensation which probably all of us have felt at some time when we have ourselves taken some irritant substance. The same sensation comes after injudicious use of undiluted alcoholic liquor.

But patients who have this symptom are not necessarily found to have taken irritant substances from without. It is possible that catarrhal inflammations of the stomach, similar to catarrhal inflammations in other mucous membranes, are responsible for a certain proportion. While I have just said that gas-forming fermentation in the stomach is rare, there are some suggestions that irritant-forming fermentation may be commoner than is recognized. Still in many patients of this type probable contributing causes are found, frequently in imperfect mastication, sometimes in irritant diet, and perhaps most of all in the habitual use of irritant dyspepsia remedies, varying from ginger and pep-

per tea even to too strong solutions of sodium bicarbonate.

(3.) *Hypertonicity syndrome*, so-called "gas-on-the-stomach." The presenting symptom of this type is the feeling of pressure in the stomach with desire to expel gaseous contents from the stomach by belching. There is, however, inability to accomplish this belching as completely as the patient feels to be desirable. Knowing that the gaseous content of the stomach is merely air, and is not a new-formed volume of gas due to fermentation, this symptom is to be interpreted as an intolerance on the part of the stomach of the air which it should normally retain. Probably this is due to increased tonicity of the stomach muscles, which may or may not be a result of the irritative syndrome or of the hyperacidity syndrome.

(4.) *The hyperacidity-ulcer syndrome.* The symptoms for which the term hyperacidity has long been in use and the symptoms of peptic ulcer merge into each other so gradually that the conclusion can hardly be escaped that the second is either a direct result or an aggravated state of the first. But not a few exploratory operations have served to show that symptoms of hyperacidity often exist in which no ulcer can be demonstrated surgically. The typical symptoms are good appetite, but fear of eating; and burning or pain regularly at a definite interval after eating—worse after a large meal than after a small one—and relieved by alkali. A symptom to which I want to call particular attention is, that intelligent patients with this condition are vividly

* Achylia gastrica is passed over in this discussion because of its relative rarity. It differs from the syndrome of general inhibited function in that secretion only seems to be at fault, the rate of emptying remaining normal or even being increased.

conscious that if the meal could pass on from the stomach more promptly they would be relieved, and that a delay in emptying of the stomach seems to them a fundamental factor in the trouble. When the discomfort is sufficiently severe the patient induces vomiting to relieve it, and regularly obtains relief.

A clinical distinction between hyperacidity and ulcer is difficult and no doubt a considerable proportion of error in both directions cannot be escaped, but in general the symptoms of hyperacidity when ulcer seems improbable are less severe, less constant and less persistent. In some cases of hyperacidity a connection can be established between the symptoms and the state of the nervous system, a connection which cannot be made out in ulcer. When actual pain and not merely discomfort from pyrosis is the presenting complaint, the likelihood of ulcer is increased. The X-ray findings are an important reliance in this differentiation.

(5.) *Hypersecretion*, so-called, may rarely be a continuous condition. More often it is a matter of occasional paroxysms, in which the patient has an increasing sense of irritation and of fullness of the stomach which culminates in the vomiting of a large amount of watery acid fluid. Clearly it is a condition in which secretion takes place actively and in which the pylorus is closed. The cause is obscure. In many patients there are headaches and neurotic disturbances, and the attacks cannot be traced to anything ingested. In other instances the attack is connected directly with something ingested. In one case the drinking of a small glass of lemonade was followed some hours later by vomiting of many times its volume. Aspirin has been seen to induce similar

vomiting of large amounts of pure secretion.

The *symptoms of cancer* of the stomach may be mentioned here briefly for comparison. The strongest suggestion of cancer of the stomach is usually the new development of gastric symptoms of any sort in a person passing beyond middle age who has previously had a normal digestion. The type of symptoms in different cases may represent any of the syndromes already mentioned, but an important early result may be pyloric stenosis, as described below. In some patients loss of appetite, especially for meat, suggesting the syndrome of deficient function, is the first symptom. In others pain in relation to eating, suggesting the hyperacidity-ulcer syndrome, may be present. In others, the pressure syndrome is prominent. An occasional variation of this, which is seen especially in large growths which do not obstruct the pylorus, is the sensation that the stomach has been filled to its limit after much less than a normal meal has been taken. In other cases a general cancerous cachexia and anemia have appeared before gastric symptoms are complained of.

Pyloric stenosis of pronounced degree usually causes the patient to be conscious that his meals are not passing on normally, and a history can usually be obtained of vomiting, and of recognition in the vomitus of food long retained in the stomach. X-ray examination is a more delicate test of pyloric stenosis. In fact, it is so delicate that some caution is necessary before assuming that delayed emptying of the stomach is due to organic obstruction.

DIAGNOSIS.

In the diagnosis of the type of gastric

disorder, it is my belief that the history, carefully taken, provided the patient can give it intelligently, is in general the most valuable source of evidence. In addition to the general history and sequence of developments, the following points are useful. These I formulated in a list over twenty years ago, and the same list on a printed form has been used by our Digestive Clinic at the Boston City Hospital.

1. Presenting symptom and its duration.
2. Appetite.
3. Difficulty in swallowing.
4. Belching.
5. Regurgitation.
6. Sense of pressure.
7. Sense of weight.
8. Sense of delay.
9. Pyrosis (heartburn).
10. Pain—Relation to eating, quality, food relief, alkali relief.
11. Nausea.
12. Vomiting—Time p. c., acidity, amount, food, blood.
13. Bowels.
14. Weight.
15. Habits of eating.

The physical examination I will condense, by mentioning only special points of value to my mind which are sometimes forgotten: The condition of the teeth, with special reference to their efficiency for mastication; gums for lead line; pupils and knee jerks; abdomen, for fullness or concavity; fullness of epigastrium; visible peristalsis; tenderness and masses; configuration of abdomen in standing.

Of laboratory tests, examination of gastric contents, which was formerly made as routine, is now used only where special information is to be expected from it. In questions of cancer, of py-

loric stenosis, of so-called hypersecretion, of achylia gastrica, important confirmatory evidence may be obtained. In most functional cases, on the other hand, the results are not of sufficient value to justify the discomfort to the patient, and the findings may even be misleading, since the condition at a single examination is by no means always representative of the usual condition.

Examination of the stools for occult blood is sometimes of value. Simple inspection of stools often gives positive proof of insufficient mastication.

X-ray examinations give important evidence not otherwise obtainable. It is not advisable, however, to depend on X-ray examinations only, but to interpret the X-ray evidence in connection with other evidence.

Now let me review from this list the deductions which can be made tentatively from each item. The first heading of presenting symptom is simply a hint of what is to follow. The appetite, if not good, suggests subnormal gastric function as well—gastric asthenia, or possibly cancer, or possibly non-gastric organic disease. Good appetite, but fear of eating, is very common in the hyperacidity-ulcer syndrome. Difficulty in swallowing is asked about as routine, because it is a curious fact that many patients who have esophageal obstruction do not mention difficulty in swallowing until they are questioned. Belching suggests the pressure syndrome. In certain cases satisfactory belching is difficult, which has led me to believe that a disturbance in function of the cardiac orifice exists resisting the upward passage of air like a valve. Patients complaining of belching often have ptosis. They usually also have irri-

tative disorders. Regurgitation is similar to belching, but its quality, whether acid or not, also gives a hint as to the condition of the gastric contents. Sometimes it is watery and tasteless. In the hyperacidity syndrome it is strongly acid. In some instances its taste suggests fermentation of food rather than pure hydrochloric acidity. Sense of pressure usually goes with belching. Sense of weight goes usually with anorexia and the gastric asthenia syndrome, and renders hyperacidity or ulcer improbable. Ptosis may exist. Sense of delay may be present in the asthenia syndrome, and is most pronounced in pyloric stenosis, but its presence in connection with pyrosis or pain is very frequent in the hyperacidity syndrome. Heartburn means irritation, which may be due to irritants ingested, to an irritable condition of the stomach or to the hyperacidity-ulcer syndrome. Pain most commonly is an advanced degree of pyrosis, and pain associated with pyrosis is suggestive of ulcer. It is sometimes possible, however, to obtain a description which indicates that the pain is griping, and may well be due to pyloric spasm.

Nausea I take in most instances to be a non-gastric rather than a gastric symptom. It is complained of most often by patients either with general diseases or with disorders of the nervous system. It is usually associated with deficient gastric function, and when it leads to vomiting after a meal the food has been but little digested. The vomiting which follows nausea when the stomach is empty brings up almost nothing and gives no relief. If the vomiting is violent enough, bile is raised.

Vomiting in irritative disorders of the stomach is distinctly different. It

is preceded by discomfort or pain in the stomach, but by little or no nausea. It gives relief of the discomfort, and is therefore often induced by the patient for the sake of obtaining relief. In the hyperacidity-ulcer syndrome it occurs at a fairly definite time after eating, contains food well advanced in digestion and is strongly acid.

The amount vomited is worth asking about. It is largest in pyloric stenosis. The character of the food in the vomitus is of interest, being unchanged in the syndrome of deficient function, and markedly changed in the hyperacidity-ulcer type. In so-called hypersecretion little but liquid is raised. In pyloric stenosis articles eaten twelve to twenty-four hours or more previously may be recognized.

Blood in vomitus may be fresh, as in ulcer, in cirrhosis or in splenic anemia, or changed to a brownish color in cancer.

Changes in the patient's weight if absent make one take the complaints less seriously. If loss of weight is present it is necessary to determine whether starvation or vomiting can account for the loss, or whether a less direct explanation such as cancer is suggested.

Habits of eating are to be inquired about, especially in the functional dyspepsias. Often the whole explanation of the complaint comes to light as the habits are investigated. The physical, laboratory and X-ray examinations contribute to the diagnosis of organic diseases, but result on the whole negatively in functional dyspepsias.

TREATMENT.

The history, both in organic and in functional diseases, gives suggestions which are essentially reliable as to the dietetic and symptomatic management.

I shall take up in order, therefore, the treatment which I have found best adapted to each of the dyspepsia syndromes which I have mentioned.

In the deficiency or inhibition syndrome or gastric asthenia, the patients complaining of poor appetite, sense of weight in the epigastrium, nausea and vomiting of undigested food, the object is to favor a greater activity of gastric function. In a large proportion of these cases there is some condition wholly apart from the stomach which is inhibiting gastric function, and if this non-gastric factor can be remedied the stomach will proceed normally. Neurasthenia is the commonest factor, but organic diseases, from pulmonary tuberculosis to heart and kidney diseases, may act in the same manner. In the exhausted patients, change of scene by a vacation, or correction of the causes of worry, may result in rapid improvement. In other patients of this sort whose general condition permits it, an increase in physical activity, especially by recreational exercise, is of great benefit.

The diet and drug treatment of these cases is less to be relied upon than correction of underlying factors. In diet, regularity is to be favored, and the articles chosen should be such as to be acceptable to the taste of the individual, but at the same time such as not to require effort on the part of the stomach. Thorough mastication should be insisted upon. Soups and condiments in moderation are of advantage. Carbohydrates, including cereal foods and well-cooked breads and simple puddings, are usually to be used largely, and solid proteins are better limited to moderate amounts. Excess of fats is also undesirable. In treatment of these patients it is well to recognize that many of them

have now and then a return of abnormally large appetite for some single meal. When this unusual appetite appears it is better not to satisfy it more than partially, since vomiting is very apt to result. Drugs are comparatively ineffectual, but for temporary use a bitter containing a small amount of hydrochloric acid sometimes aids slightly. Dilute hydrochloric acid z 135, tincture of nux vomica z 1133, compound tincture gentian qs , ad z iv. Sig. A teaspoonful in a wine glass of water before meals may be given.

In the second or irritative group, where the stomach seems to be irritated by food taken in, the important indication is to be sure that nothing is taken into the stomach which can serve as an irritant. This applies to drugs as well as to foods. An empirical rule by which the diet for these cases may be judged is to allow nothing to be eaten which could not be applied painlessly to a burn of the skin. Thus salt foods, spices, acids, and coarse-grained or scratchy foods are better avoided: whereas milk, cereals, eggs, fresh meats, mashed vegetables, and other bland foods may be allowed. Mastication must be sufficient to remove all lumps before each mouthful is swallowed. It is usually better to allow only three meals a day, at intervals of not less than five hours. Sometimes starvation for a day is worth while. Over-eating on any occasion is to be prevented. In these cases it is sometimes of benefit to have the patient sip a glass of normal salt solution containing a teaspoonful of milk of magnesia one-half hour before each meal. Bitters are better avoided, and the usual dyspepsia remedies containing sodium bicarbonate, with some strong flavoring, are best forbidden

strictly. There is little doubt that the frequent use of these is an important cause in continuing dyspepsias of this class.

There is a suspicion that in some of these cases a certain amount of fermentation may go on in the stomach which forms irritants such as acetic and butyric acid, though little gas formation results. Any sour odor which may be present in vomitus is to be attributed to such fermentation, since hydrochloric acid is odorless. When such fermentation is suspected, the interval between meals should be lengthened. Sodium benzoate, ten grains three times a day after meals, is sometimes followed by improvement.

The third group of patients whose principal symptom is pressure, attributed to gas, and inability to belch satisfactorily, in most cases have also symptoms of gastric irritation which are to be treated as well. The treatment of the symptom of pressure has, as its most important factor, the avoidance of filling the stomach to its capacity at any time. This is best affected by causing the patient to take his total nourishment in six meals, instead of three, in the day. Moreover, since the greatest bulk of most meals is composed of the water or other liquids taken with them, these meals are better taken dry, or nearly dry, the fluid intake being made up by drinking water between meals. Here again dyspepsia remedies are better avoided. Habit plays a large part in some of these cases. It is of some assistance to explain that there is no reason to force the belching or to exaggerate its importance.

The hyperacidity-ulcer syndrome is to be treated either by minor measures or by close restrictions, according to its

severity, the principles being the same as those applicable to peptic ulcer. These are (1) to avoid large meals; (2) to avoid articles of diet which stimulate active secretion by the stomach; (3) to favor articles of diet which are passed on rapidly by the stomach; (4) to neutralize excessive acidity in the stomach as it occurs; and (5) to give bile salts as a measure which empirically does good, perhaps by favoring more rapid evacuation of the stomach in the normal direction.

When the condition is at all severe, it is better to advise that three lunches of crackers and milk or the like shall be taken between meals and at bed-time, and that the three regular meals shall be made small ones. Meat flavorings, fried foods, soups, gravies and pastry are especially likely to aggravate this condition. Salt and smoked foods and spices are also to be excluded. Mastication to secure complete subdivision of all solid foods is to be insisted upon. The patient should have with him at all times some substance which is capable of neutralizing acid, and should take enough of this to secure relief promptly when pyrosis or pain appear. Sodium bicarbonate may be used for this purpose, but to prevent an irritant effect by the soda itself it should be taken only in large amounts of water. Milk of magnesia, where it will serve the purpose without causing looseness of the bowels, is preferable, since it is less irritant. Calcium carbonate or chalk, combined with magnesia or with soda is useful against acidity, lessening the laxative action.

Preparations of bile salts are of considerable service against hyperacidity. Many of these preparations, however, do harm instead of good, because they are

not sufficiently coated, and therefore act as irritants to the stomach before they can pass on to the intestine. The tablets sold under the name of Glycotauro (N. N. R.) are free from this fault, and can be given in large doses without producing irritation. I have been in the habit of giving four tablets three times a day for three days, or until improvement occurs, and then three tablets each morning.

Severe cases of hyperacidity, even though it is thought that ulcer is not present, are benefited by the strict medical treatment of peptic ulcer.

Hypersecretion, which is more probably a reflex result affecting the stomach than a true disease of the stomach, is difficult to improve. Usually there is obvious need to stabilize the nervous equilibrium and to regulate the general

mode of life. The bland diet advised for the irritation syndrome and avoidance of irritant drugs are to be recommended. Atropin is sometimes of distinct benefit. Bromids may be of assistance.

The treatment of peptic ulcer is so well systematized that its description may be omitted. The treatment of cancer is either surgical or only palliative. The treatment of pyloric stenosis of any pronounced grade should always be surgical, and not too long delayed.

Dyspepsias secondary to non-gastric diseases are treated most effectually through treatment of the primary disease. Where this is not possible, however, they can often be improved by treatment according to the type of their symptoms as already described for ordinary dyspepsias.

BOOK REVIEW

Life Insurance Medicine. Published by New England Mutual Life Insurance Co.

The wonderful record of public disease prevention accomplished by the Metropolitan Life Insurance Company is being emulated by the medical department of the New England Mutual Life Insurance Company, and Volume I of *Life Insurance Medicine*, just issued, is devoted largely to the increase in circulatory diseases, as reported by statisticians. It is made evident that our lowered death rates in recent years

are mainly confined to infectious diseases. An interesting cardio-respiratory test by Dr. Frost has been checked up on 1,500 cases in the past three years and is believed by him to give a true reading of cardiac function under measured pressure. This Life Insurance Company is giving preferred standing on examinations made of applicants who take periodic health examinations. The New England Mutual Life Insurance Company is to be congratulated upon its medical department.

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EDITORIAL COMMENT

A New England Medical Council

On the invitation of Dr. James S. Stone, President of the Massachusetts Medical Society, acting on authority conferred by the Council of the Massachusetts Medical Society, a group of men representing the medical societies of the New England States met at the Harvard Club, November 17th, at 12.00 o'clock, to discuss the advisability of forming a council or conference for the discussion of problems which concern the practice of medicine, medical education, public health, legislation, and in general all matters relating to the welfare of physicians.

The following named representatives of the societies were present:

Dr. James S. Stone, President of the Massachusetts Medical Society.

Dr. David W. Parker, President of the New Hampshire Medical Society.

Dr. D. E. Sullivan, Secretary of the New Hampshire Medical Society.

Dr. Thomas W. Luce, Ex-President of the New Hampshire Medical Society.

Dr. Lester D. Gerrish, President of the Maine Medical Association.

Dr. Bertram L. Bryant, Secretary of the Maine Medical Association.

Dr. F. Y. Gilbert, editor of the JOURNAL OF THE MAINE MEDICAL ASSOCIATION.

Dr. W. G. Ricker, Secretary of the Vermont Medical Society.

Dr. Thomas S. Brown, of the Vermont Medical Society.

Dr. Herbert G. Partridge, President of the Rhode Island Medical Society.

Dr. Edwin A. Hyatt, of the Vermont Medical Society.

Dr. Walter P. Bowers, of the Massachusetts Medical Society.

Dr. Frank H. Wheeler, of the Connecticut Medical Society, sent a letter expressing approval of the purpose of the meeting and regretting his inability to be present.

On motion, duly made and seconded, it was voted to proceed to a temporary organization, and Dr. David W. Parker, of Manchester, N. H., was elected temporary President, and Dr. Walter P. Bowers, of Boston, temporary Secretary.

Among the problems discussed at this meeting was Medical Legislation; Workman's Compensation Act; Group Insurance, not only for malpractice suits, but for automobiles, etc.; The Physician's Relations to the Public.

The meeting was full of interest for those in attendance, and it was voted to meet again in January, at which time the various problems would be presented in concrete form, with some definite recommendations.

The officers of the state associations in attendance at this meeting are requested to submit the following plan of organization for a New England Medical Council to their respective state associations, viz.: Each state to be represented by a committee of five, two of whom shall be the President and Secretary, while the other three shall

be elected by the House of Delegates, as follows: one for one year, one for two years and one for three years, and thereafter one elected each year for a term of three years.

When approved by all the states and the representatives elected, the Council will organize and elect permanent officers, adopt by-laws and proceed to consider the various problems as presented. This Council, of thirty members, will represent some 7,000 physicians, and will be of great value to the profession and the public.

COUNTY NEWS AND NOTES

Androscoggin County Medical Society

The regular meeting of the Androscoggin County Medical Society was held at Dewitt Hotel, Lewiston, Nov. 9, 1926.

Meeting called to order by Dr. W. W. Bolster, President.

Records of previous meeting were not read.

Returns of different committees relating to the Maine Medical Association meeting at Poland were read.

Dr. E. A. Cadman, of Boston, gave a very interesting talk on "Injuries of the Shoulder."

The following doctors were present: W. W. Bolster, E. V. Call, J. Sturgis, W. J. Fahey, E. B. Baker, L. P. Gerish, R. M. Randall, E. P. Goodrich, R. A. Goodwin, W. L. Haskell, B. W. Russell, E. C. Higgins, W. E. Webber, L. Sweatt, B. G. W. Cushman, Geo. P. Emmons, W. J. Renwick, Geo. A.

Schneider, R. N. Randall, G. W. Twaddle, A. W. Plummer, C. H. Cunningham, L. J. Dumont.

L. J. DUMONT, M. D.,
Secretary.

Penobscot County Medical Society

The annual meeting of the Penobscot County Medical Society was held at the Bangor House, Nov. 16, 1926.

The following officers were elected for the ensuing year:

President—S. N. Marsh, Enfield.

Vice-President—C. M. Thomas, Brewer.

Secretary and Treasurer—H. C. Scribner, Bangor.

Member of Board of Censors—E. R. Herlihy, Bangor.

Delegate to Maine Medical Association—L. H. Smith, Winterport; Alternate, J. H. Murphy, Dexter.

H. L. Johnson, M. D., elected to

Board of Censors to succeed H. C. Scribner, M. D., who resigned.

An invitation to the Penobscot County Medical Society, from George H. Stone, M. D., Superintendent of the Eastern Maine General Hospital, to hold its December meeting at the hospital in connection with a clinic to be held on December 20th and 21st, was accepted by the Society.

The minutes of the last meeting were read and accepted.

Charles L. Scudder, Boston, Mass., gave an interesting paper on "Certain Practical Problems."

Business meeting at 7.30; dinner at 8.00.

The following were present: Luther S. Mason, M. D., Charles L. Scudder, Boston, Mass., S. N. Marsh, West Enfield, G. B. Tibbetts, Orrington, H. C. Scribner, H. D. McNeil, M. E. Witte,

Jr., L. H. Smith, Winterport, S. S. Silsby, S. J. Redman, Dexter, H. C. Knowlton, Hampden, W. E. Fellows, C. J. Hedin, N. R. Cook, Newport, R. E. Bowsfield, J. H. Johnson, J. F. Starrett, M. W. Emerson, A. E. Small, L. F. Wright, H. W. Johnson, J. B. Woods, W. B. Trickey, Pittsfield, L. H. Ford, Daniel McCann, F. D. Weymouth, Brewer, E. B. Sanger, Galen Woodcock, C. J. O'Brien, H. D. Walton, Frankfort, A. J. Bradbury, Old Town, J. B. Thompson, A. W. Fellows, M. C. Montton, F. B. Ames, H. E. Thompson, H. G. McKay, Howland, J. P. Russell, J. H. Murphy, Dexter, C. M. Thomas, Brewer, Joseph Lezбург, Kenduskeag, Allen Woodcock, C. H. Burgess, A. C. Strout, Dexter, E. W. Russell, H. M. Goodwin, M. C. Madden, Old Town, Luther March, D. W. Sheldon, Stetson.

BOOK REVIEW

Cancer of the Larynx. By Dr. John Edmund Mackenty, of New York City.

Although cases of this nature are rare in the practice of even the busiest of surgeons, they are cropping into sight here and there, so that the need of a monograph like this one before us is easy to see and to recommend for perusal. Unfortunately for the would-be purchaser of such a monograph, there is no clue upon the title page of its publisher. In the sixty-four pages of contents, a brief glance is cast at the bibliography of cancer in this region, but most of the remaining pages are given to a careful and well illustrated account of the proper performance of a radical

operation for removal and cure of the growth invading the parts concerned. After a careful though brief account of other operations for this affection, the writer offers a detailed description of his own method, and this is well and handsomely illuminated with fourteen well-drawn illustrations, showing all the steps to follow for a good result. This monograph is well worth obtaining and placing for reference upon the book shelves of every surgeon, hoping and proposing, when occasion offers, to carry out the very latest improvements and advances in special local surgery of the larynx. As such, we speak for it a good word to our readers.

J. A. S.

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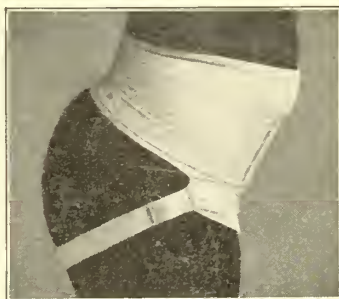
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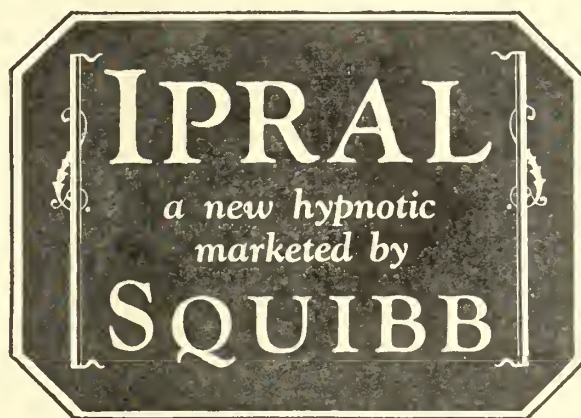
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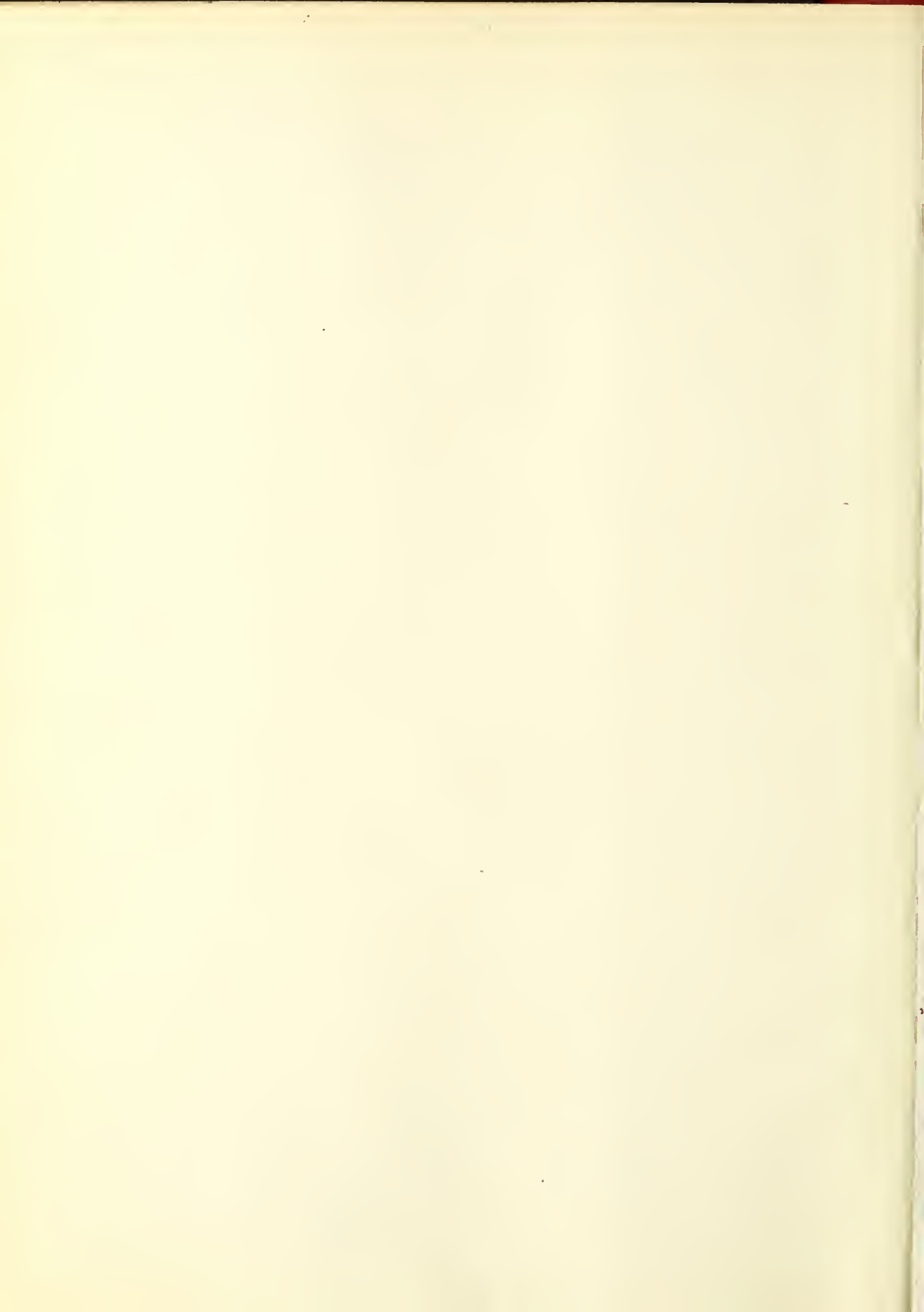
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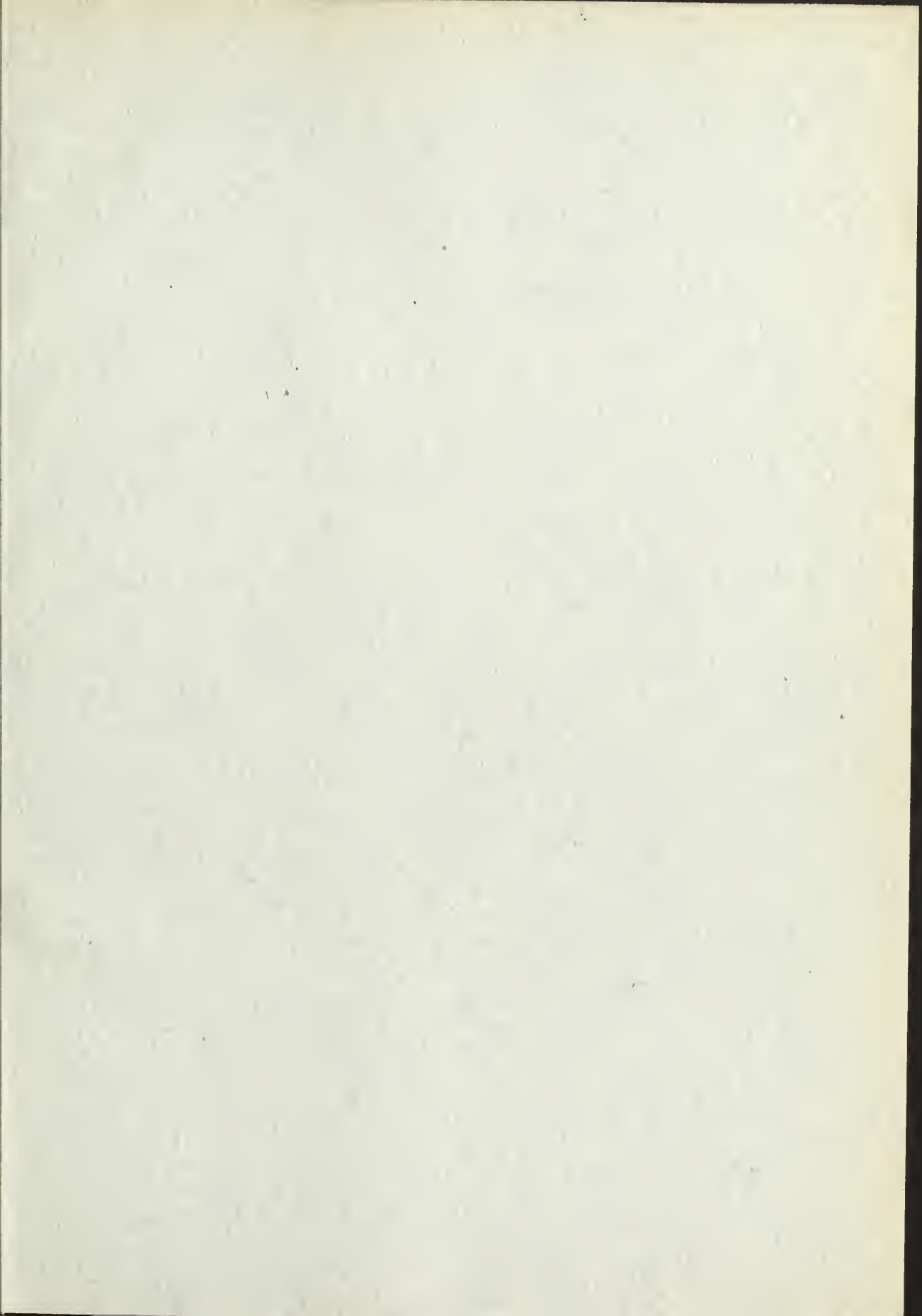
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